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WARNING

THE FOLLOWING SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO AVOID PERSONAL INJURY, DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO. REFER TO OPERATORS SAFETY SUMMARY AND SERVICE SAFETY SUMMARY PRIOR TO PERFORMING ANY SERVICE.

PLEASE CHECK FOR CHANGE INFORMATION AT THE REAR OF THIS MANUAL.

1980
ANSWER
AUTOMATIC VIDEO MEASUREMENT SET
SERVICE VOL 1

INSTRUCTION MANUAL

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070-2921-00
Product Group 20

Serial Number ________________

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PREFACE

The information in this manual is intended to help maintain and repair the 1980. Use this manual along with other 1980 manuals.

Refer to the 1980 Service Installation Manual for installation procedures. Refer to the 1980 Operator's Manuals and the other 1980 instruction manuals for information about normal operation.

This manual includes information on preventive maintenance, troubleshooting, and corrective maintenance. Use the preventive maintenance information to help keep the 1980 in good working condition.

If the 1980 does not seem to be operating properly, refer to this manual and the 1980 Service, Vol. 2 - Diagnostics and Calibration. Using the information included can help identify the source of a problem. In most cases the faulty assembly can be identified by the 1980 power-up self-tests.

When a faulty assembly is isolated, use the theory of operation, schematic diagrams, and the information in the Diagnostics and Calibration volume to isolate faulty components. Use the corrective maintenance information in this manual to repair the 1980.

The manual is written to an audience of service technicians with experience in both video and digital circuitry.

The intent of the manual is to allow service to the component level. However, some of the information required for component level service is included in a separate volume because of the quantity of material involved, the equipment required, and ease of updating the manuals. Volume II, Diagnostics and Calibration, is referred to in this manual where appropriate.

The front matter includes a preface; tables of contents, illustrations, and tables; safety summaries; and a frontispiece illustration.

This Preface contains information about the manual, its purpose and structure.

Section 1, General Information, includes documentation and product overviews. The documentation overview includes more detail and information not included in the preface. The product overview contains a clear, brief, non-technical description of the product. This includes telling what the product does, what major pieces make up the product, and what is required to operate it. Also, safety standards applying to the product are mentioned in the product description.

Section 2, Specification, the 1980 Operator's manuals are referred to for a listing of instrument specifications.

Section 3, Operating Information, includes a reference to the operator's manual.

Section 4, Theory of Operation, includes a technical overview of the instrument, and block descriptions of all assemblies. More detailed circuit descriptions are used for assemblies that are not supported with signature analysis.

Section 5, Checks and Adjustments, refers the reader to Volume II, Diagnostics and Calibration.

Section 6, Maintenance, presents information on prevent maintenance, troubleshooting, and repair techniques. The Troubleshooting portion refers the reader to Volume II, Diagnostics and Calibration.

Section 7, Options, contains a summary of available options; references to the location of option information; and details required for servicing of options.

Section 8, Installation, refers the reader to the 1980 Service Installation manual.

Section 9, Replaceable Electrical Parts, contains the electrical parts list of the instrument. The assembly replacement service policy requires using instrument serial numbers for assembly level history, and using assembly versions for component level history.

Section 10, Diagrams, contains the block and schematic diagrams, parts location tables, circuit board illustrations, adjustment locations, etc.

Section 11, Replaceable Mechanical Parts, contains the exploded view drawings of the instrument, and the mechanical parts list.

The Accessories information follows the mechanical parts list. The standard accessories and any necessary illustrations are included here.

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OPERATORS SAFETY SUMMARY

The general safety information in this part of the summary is for both operating and servicing personnel. Specific warnings and cautions will be found throughout the manual where they apply, but may not appear in this summary.

TERMS

In This Manual

CAUTION statements identify conditions or practices that could result in damage to the equipment or other property.

WARNING statements identify conditions or practices that could result in personal injury or loss of life.

As Marked on Equipment

CAUTION indicates a personal injury hazard not immediately accessible as one reads the marking, or a hazard to property including the equipment itself.

DANGER indicates a personal injury hazard immediately accessible as one reads the marking.

SYMBOLS

In This Manual

⚠ This symbol indicates where applicable cautionary or other information is to be found.

As Marked on Equipment

ϟ DANGER — High voltage.

⏚ Protective ground (earth) terminal.

⚠ ATTENTION — refer to manual.

Power Source

This product is intended to operate from a power module connected to a power source that will not apply more than 250 volts rms between the supply conductors or between either supply conductor and ground. A protective ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Grounding the Product

This product is grounded through the grounding conductor of the power module power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective ground connection by way of the grounding conductor in the power module power cord is essential for safe operation.

Danger Arising From Loss of Ground

Upon loss of the protective-ground connection, all accessible conductive parts (including knobs and controls that may appear to be insulating) can render an electric shock.

Use the Proper Fuse

To avoid fire hazard, use only the fuse of correct type, voltage rating and current rating as specified in the parts list for your product.

Refer fuse replacement to qualified service personnel.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere unless it has been specifically certified for such operation.

Do Not Operate Without Covers

To avoid personal injury, do not remove the product covers or panels. Do not operate the product without the covers and panels properly installed.

SERVICE SAFETY SUMMARY

FOR QUALIFIED SERVICE PERSONNEL ONLY

Refer also to the preceding Operators Safety Summary.

Do Not Service Alone

Do not perform internal service or adjustment of this product unless another person capable of rendering first aid and resuscitation is present.

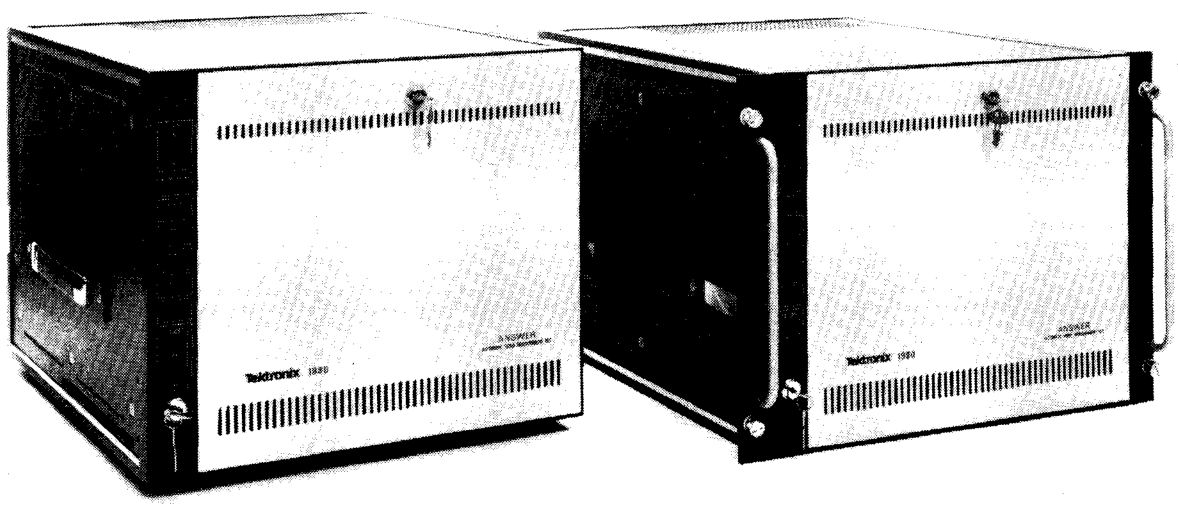
Use Care When Servicing With Power On

Dangerous voltages may exist at several points in this product. To avoid personal injury, do not touch exposed connections and components while power is on.

Disconnect power before removing protective panels, soldering, or replacing components.

Power Source

This product is intended to operate from a power source that will not apply more than 250 volts rms between the supply conductors or between either supply conductor and ground. A protective ground connection by way of the grounding conductor in the power cord is essential for safe operation.



2921-00

TEKTRONIX 1980 Answer, Automatic Video Measurement Set.

GENERAL INFORMATION

This section contains a documentation overview and a product overview.

Documentation Overview

The information in this manual is intended to be used along with other 1980 manuals to help maintain and repair the 1980. This manual is intended for use by service technicians with experience in both video and digital circuitry. Refer to the 1980 Service Installation manual for installation procedures. Refer to the 1980 Operator's manuals, and other 1980 manuals as appropriate, for information about normal operation.

This manual includes maintenance information, circuit descriptions, circuit diagrams, and parts lists. Also included are pointers to other manuals that contain pertinent information. Other 1980 manuals include:

User's Manuals - Standard Accessories
- Service Installation
- Operators (including options)
- Terminal Driver
- Video Driver
- Measurement Commands
- Graphics Commands
- TEK ANSWER BASIC
- Programmer's Reference Card

User's Manuals - Optional Accessories
- Software Maintenance for Options

Service Manuals - Optional Accessories
- Service Vol. 2, Diagnostics and Calibration
- Service Kit Instruction Sheet

Product Overview

The 1980 is an automatic video measurement set. Video signals are fed into the set, selected parameters measured by the set, and results recorded on an I/O (input/output) device.

The instrument consists of two major functional blocks; acquisition circuits, and processing circuits. The acquisition circuits acquire the video signal and convert it to digital form. The processing circuits process the converted signal data, performing selected measurements on the data.

This product is designed and tested in accordance with the requirements of industry safety standards. These standards include:

UL 478
UL 1244
IEC 348

SPECIFICATION

The specifications for this product are located in the 1980 Operator's manuals. These manuals are standard accessories, and their part numbers are located in the Accessories list of this manual.

OPERATING INFORMATION

Operating information for this product is contained in a separate volume, titled 1980 Operator's. Measurement application option operating information is included in the appropriate operator's manual for the option. Also, setup information to prepare for operation is included in the 1980 Service Installation manual. All of these manuals are standard accessories, and part numbers are located in the Accessories list.

THEORY OF OPERATION

This section contains block and detailed circuit descriptions of the 1980. Block descriptions are included for all assemblies. Detailed descriptions are included for those assemblies that are not fully covered by diagnostics and signature analysis.

These descriptions should be used in conjunction with the schematic diagrams at the rear of the manual. Most descriptions are keyed to the blocks outlined on the schematics.

Many of the assemblies may be adequately serviced using the diagnostics and signature analysis procedures located in the 1980 Service Manual, Volume 2, Diagnostics and Calibration. Calibration and troubleshooting hints are also included in that manual.

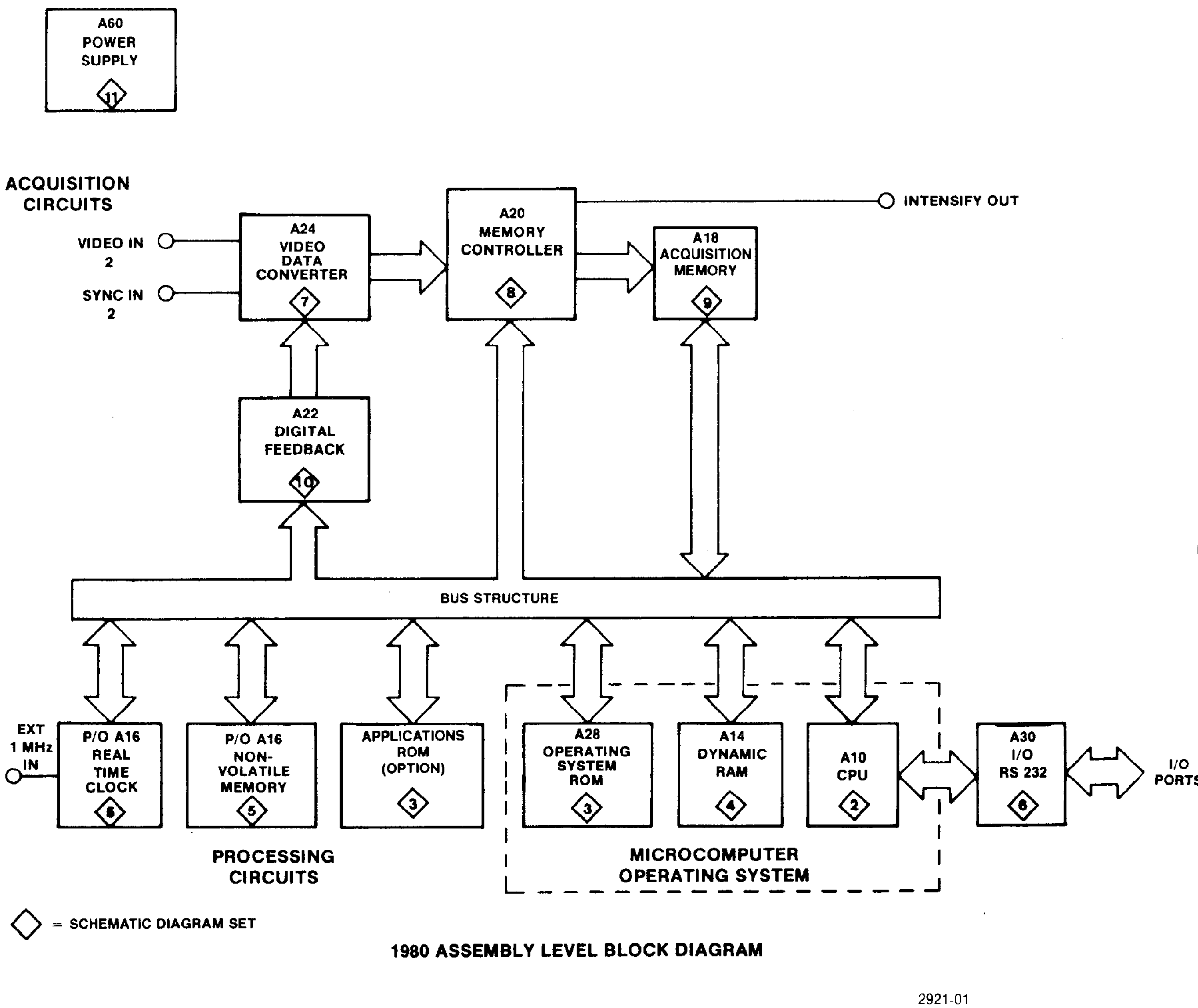


Fig. 4-1. 1980 Assembly-Level Block Diagram.

1980 BLOCK DESCRIPTION

The 1980 is an automatic video measurement set. Video signals are fed into the set, selected parameters measured by the set, and results recorded on an I/O (Input/Output) device. Fig. 4-1 shows an assembly-level block diagram of the set.

The 1980 consists of two major functional blocks, acquisition circuits and processing circuits. The acquisition circuits acquire the video signal and convert it to digital form. The processing circuits process the converted signal data, performing selected measurements on the data.

Acquisition Circuits

The acquisition circuits include an analog-to-digital converter, a memory controller, high-speed memory, and feedback to the converter.

The Video Data Converter (A24) acquires the video signal, and converts it from an analog signal to digital data. Data is acquired by the Video Data Converter at a faster rate than the microcomputer can handle it. The Memory Controller (A20) directs this high-speed data into the Acquisition Memory (A18), where it is collected until the microcomputer can process it.

The Digital Feedback (A22) provides control information to the Video Data Converter. During certain measurements, the Digital Feedback circuit alters the gain and offset applied to the input signal so that the measurement accuracy and resolution are increased.

Processing Circuits

The processing circuits include a microcomputer, applications programs, non-volatile memory (NVM), a real-time clock, and RS-232C I/O (Input/Output) ports.

The microcomputer is the heart of the 1980. It consists of the Central Processing Unit (CPU), Random Access Memory (RAM), and the Operating System ROM (Read Only Memory). The CPU (A10) controls the system operation and communication. This is done by performing computations according to instructions the CPU receives.

The Dynamic RAM (A14) provides workspace storage area for the CPU. The CPU can access RAM quickly and directly. Information stored in the Applications ROM or NVM is called into the RAM address locations for processing. New information can be temporarily written and modified in the RAM locations, then stored in NVM for future use.

The Operating System ROM (A28) stores the TEK ANSWER BASIC operating system firmware, allowing a high-level programming language for communication with the microcomputer.

Programs contained in the Applications ROM cause the microcomputer to mathematically manipulate the video signal data, thus performing the selected measurements. The memory boards containing the applications programs have different assembly numbers according to the memory contents. For example, the NTSC Measurements (Option 01) program is contained on Applications ROM assemblies A34 and A36 in Option 01 instruments. See the Options section of this manual for a list of Applications ROM boards for the various applications options.

Non-Volatile Memory (part of A16), which can contain user programs and data, is protected by batteries as an alternate power source. The Non-Volatile Memory consists of 8K (K = 1024) words of memory, of which approximately 4K words can be write-protected by the front-panel key switch.

The Real-Time Clock (also part of A16) is used to schedule operations at specific time intervals. Timed measurement intervals are operator controlled by TEK ANSWER BASIC commands or an application program. The clock is internally referenced to a crystal oscillator, but can be referenced to a remote source, such as a rubidium standard. The clock output, whether internally or externally referenced, can be printed out with the measurement results.

The bus structure ties all of the processing circuits and the output of the acquisition circuits together. Communications over the buses allow selection and control of the circuits, and the transfer of data. Buses include the Data, CRU, Address, and Control Buses.

The Data Bus carries data both to and from the CPU. The bus consists of sixteen parallel lines, one for each data bit. The CPU controls the direction of data flow by preparing other circuits on the bus to send or receive data. This is done using the Address Bus and Control Bus.

The CRU (Control Register Unit) Bus transfers data serially using three lines. The lines are CRUIN for data into the CPU, CRUOUT for data from the CPU, and CRUCLK to synchronize the circuits sending and receiving the data.

The Control Bus contains control lines to and from the devices that the CPU controls.

The Address Bus selects the source and destination locations for communications from the CPU. Addressed devices and circuits are enabled by detecting their address on the bus. Addresses for the Data Bus and for the CRU Bus are distinguished by enable signals on the Control Bus. The 1980 has nineteen address lines.

Five RS-232C I/O ports are available for communication with the set. A typical user has a computer terminal attached to an I/O port for sending commands and receiving the results, or to program the set. The I/O ports may also be used to connect other peripherals, such as printers and plotters. Modems may be attached to some ports to allow use over telephone lines.

ASSEMBLY DESCRIPTIONS

CPU (A10) Block Description

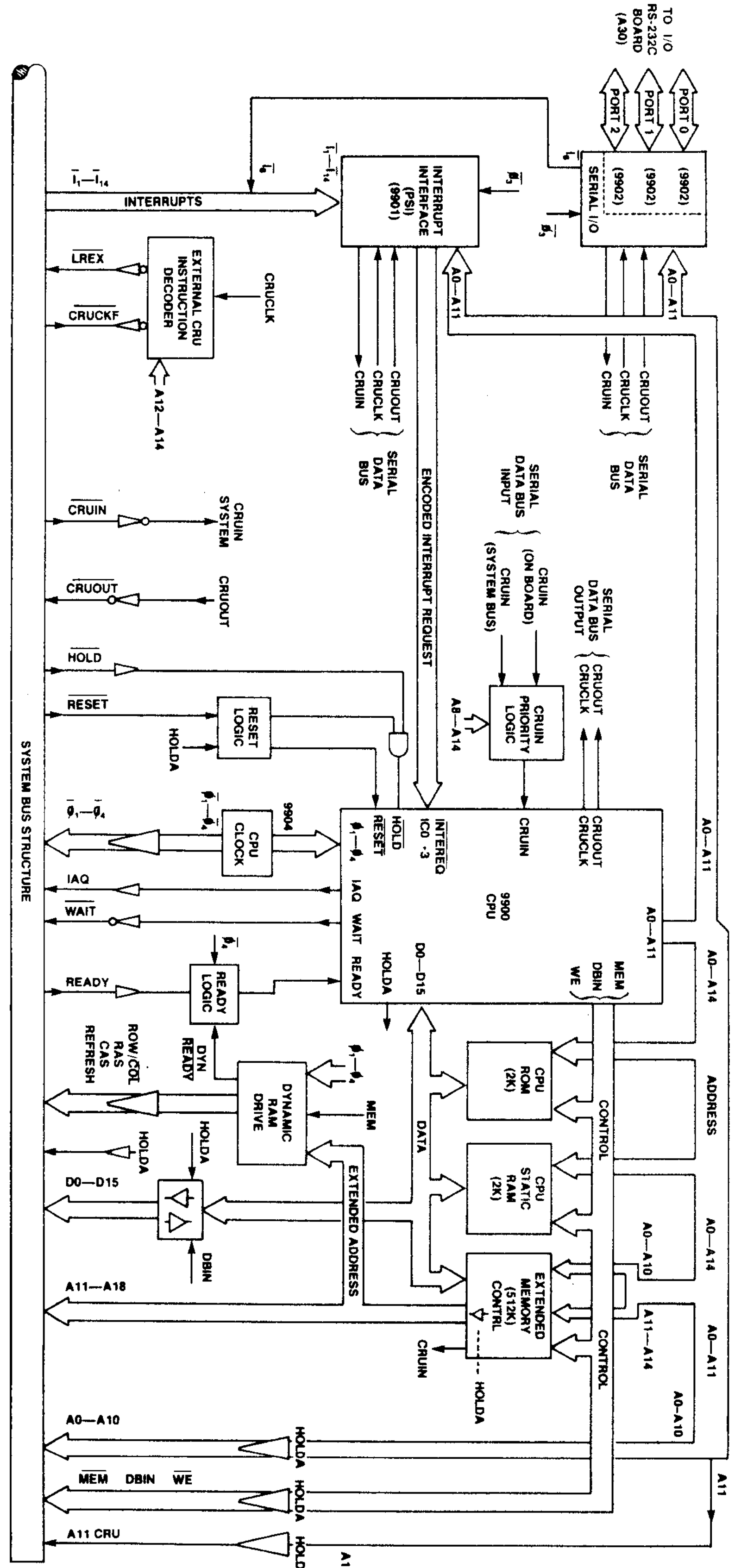
The CPU board (A10) controls all data flow within the digital portion of the 1980, except the high-speed data associated with the video acquisition circuitry. The board contains three RS-232C serial I/O ports and can handle up to fifteen interrupt requests at a time. There are also 4K (K = 1024) words of addressable memory on the board.

A sixteen-bit microprocessor controls the board operations. A crystal-controlled, four-phase clock synchronizes the operations. There are two separate bus structures associated with the CPU. One is reserved for memory addressing operations and provides for parallel data transfer between memory and CPU. The other is a Communications Register Unit (CRU) Bus, which provides serial data transfer for the CPU. The CRU Bus communicates with the I/O ports and interrupt handler, as well as such external functions as the Real-Time Clock (on the NVM board - A16), the Memory Controller (A20) State Machine, and some hardware diagnostic circuit elements.

The CPU Address Bus can address up to 32K words of memory. Memory map circuitry expands this addressing capability into a 512K-word total addressable memory capacity, of which 4K words are physically located on the board. Of this, 2K words of read-only memory (ROM) contain power-up diagnostics, memory mapping initialization routines, and other utility routines. Also, 2K words of static random access memory (RAM) provide a workspace area for the CPU.

The fifteen interrupts received are prioritized and may be masked. The highest priority interrupt is then encoded and transferred to the CPU for servicing. In addition, the board contains several software-programmable timers. The Serial CRU I/O interface consists of the three RS-232C port circuits on the board, plus the two ports accessible through the I/O board.

Other features are designed into the CPU board to facilitate troubleshooting. These include signature analysis to locate hardware problems and CPU single-stepping to isolate both hardware and firmware problems.



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Fig. 4-2. CPU (A10) Block Diagram.

CPU Detailed Description

The CPU board circuits are divided into four functional blocks. These are the Processor, the CPU memory, the Dynamic RAM Drive, and the Extended Memory Control. Each of these are shown on separate schematic pages. Refer to the associated schematic while reading the following descriptions.

PROCESSOR (Diagram 2A)

A 9900 microprocessor (U441) controls all board functions. This CPU is a sixteen-bit, word-oriented processor. There are fifteen address lines present on the CPU Bus structure which allow the 9900 to access 32K words (64K bytes) of memory space. The sixteenth (and least significant) address bit is used to distinguish between the upper and lower bytes of a word and it only appears on the internal bus of the 9900.

The software addressing is byte addressing, but since the LSB is only used internally, the hardware address which appears on the bus is equal to the integer part of the software address divided by two. Consequently, software addresses must be incremented by two in order to increment hardware addresses by one. All addresses in this manual are software addresses, unless otherwise specified.

EXAMPLE

16 bit S/W address		15 bit H/W address	
hex	binary	binary	hex
100<u>0</u>	0001 0000 0000 00<u>00</u>	000 1000 0000 000<u>0</u>	080<u>0</u>
100<u>1</u>	0001 0000 0000 00<u>01</u>	000 1000 0000 000<u>0</u>	080<u>0</u>
100<u>2</u>	0001 0000 0000 00<u>10</u>	000 1000 0000 000<u>1</u>	080<u>1</u>

NOTE

On all 1980 schematics, the Address and Data Buses conform to certain conventions. Bits A0 and D0 refer to the <u>least</u> significant bits (LSB) of the two buses. The reader should exercise caution in comparing any literature about the 9900, since this is the opposite of the manufacturer's nomenclature. This manual may refer to the "hidden" bit as A(-1) if the description requires the added clarity.

CPU Structure. The basic Architecture of the 9900 consists of a sixteen-bit Data Bus and three internal registers. These registers are the Program Counter (PC), the Status register (ST), and the Workspace Pointer (WP). The Program Counter contains the address of each instruction and increments by two for the next instruction word. The Status register is a set of flags reflecting the result of an operation. It is updated following execution of each instruction. The Workspace Pointer contains the starting address of sixteen contiguous words of memory that are used as scratch-pad registers R0 through R15.

Status bit definitions are as follows:

Bits 0 - 3 = Interrupt Mask

Bits 4 - 8 = Reserved

Bit 9 = XOP Instruction Being Executed

Bit 10 = Parity

Bit 11 = Overflow

Bit 12 = Carry

Bit 13 = Equal

Bit 14 = Arithmetic Greater Than

Bit 15 = Logical Greater Than

At any time the CPU may have from one to fifteen interrupts requesting service. The interrupts are prioritized and encoded by a 9901 Programmable Systems Interface (PSI) that is described later. The highest priority interrupt is identified by a four-bit code on lines IC0 through IC3 and is acknowledged by the CPU. Only an interrupt of even higher priority may interrupt the CPU once the service routine is entered. By loading the Status register interrupt mask, interrupts equal to and below any level may be disabled. The CPU always checks this mask to verify that an interrupt is enabled before branching to its service routine.

The 9900 is reset from either the front panel or the board itself (during diagnostic testing). This loads new WP and PC values from memory locations 0 and 2, respectively. The old WP, PC, and ST values are stored in registers R13, R14, and R15 of the new workspace; the status register is reset to zero; and the program continues execution at the new PC location.

CPU Clock. A crystal-controlled clock (U311) drives the CPU. An overtone crystal and an LC tank circuit together fix the oscillator frequency at 46 MHz. It is divided by sixteen, producing four sequential clocks at 2.87 MHz. Each is shifted from the previous clock by a quarter-cycle in order to synchronize each phase of a CPU operation.

Parallel Data Transfer. Parallel data words are transferred between the CPU and memory over the Data Bus. The Data Bus is sixteen bits wide and is bi-directional. The data may be stored in memory that is addressed and enabled by the CPU. The microprocessor can address 32K words of memory using address lines A0-A14. The Extended Memory circuitry (explained later) on the board allows addressing up to 512K words of memory.

Control signals are used to enable and direct data flow as follows:

1. MEM (active low) - Memory enable
2. DBIN - Enable Read Buffers (high)
Enable Write Buffers (low)
3. WE (active low) - Write enable

The MEM signal must be active for memory to be accessed. When MEM is active (low) and DBIN is high, the data at the addressed location is placed on the Data Bus to be read by the CPU. When the WE signal is active (low) and DBIN and MEM are both low, the CPU writes data onto the Data Bus and enables the addressed memory location to be written into.

A Wait State may be necessary to extend a machine cycle in order to accommodate slow memory. In this case, the memory issues a Not Ready signal to the CPU. Cycle completion is delayed until the memory signals that it is Ready. The CPU keys its Wait signal from the condition of the Not Ready signal to inform the rest of the 1980 of its Wait status. Normal read/write, ready, and wait state timing relationships are shown in the TMS 9900 Microprocessor Data Manual published by Texas Instruments, Semiconductor Group.

Serial CRU Input/Output. The 9900 uses a common set of address lines for CRU and memory operations. The MEM signal must be inactive (high) for a CRU operation to take place.

The Communications Register Unit (CRU) occupies 4096 bits of I/O address space. It performs serial bit-transfer operations between the CPU and devices on the CRU Bus. Three lines are associated with this bus. Two of these form a single-bit data bus, while the third is a control line. They are defined as follows:

1. CRUIN - inputs one bit from the specified CRU address.

2. CRUOUT - outputs one bit to the specified CRU address.

3. CRUCLK - informs the output destination that CRUOUT contains a valid data bit.

A bit on the CRU Bus is addressed by the twelve lines A0 through A11 with A12 through A14 equal to zero. Although only one bit at a time is transferred per machine cycle, a single instruction may cause up to sixteen bits to be automatically transferred in a continuous stream. The starting address for a CRU transfer is contained in R12 of the current workspace.

The CRU Bus, due to its time-consuming serial aspect, is used primarily to communicate with slower I/O devices, such as ACCs, and for diagnostic software. Memory and faster I/O devices generally use the faster, more efficient, parallel 16-bit Data Bus. CRU interface timing is shown in Texas Instrument's _TMS 9900 Microprocessor Data Manual_.

Data and Address Buffers. The Address and Data Buses are buffered through tri-state buffers to minimize loading effects and to control the data flow. Addresses sent off the board are buffered through U732 and U711. The Data Bus is buffered by U761, U752, U751, and U742. Each data line has an input buffer and an output buffer.

The Data Direction Logic (U771) determines whether the data buffers should be enabled to read data onto, or write data off of the board. The Din and Dout signals control the buffer direction. The Din signal controls the input buffer, and enables it for an off-board read when active (low). The input buffer is disabled when Din is high. The Dout signal controls the output buffer, and enables it for an off-board write when active (high). The output buffer is disabled when Dout is low. A summary of the Data Direction Logic is shown in Table 4-1.

JUMPER P041	HOLDA	DBIN	A12-A14	DOUT	DIN	FUNCTION
TEST	x	x	x	L	H	Diagnostic
NORM	H	x	x	L	H	CPU Not Busy
NORM	L	L	x	H	H	CPU Write
NORM	L	H	000	H	H	On-board Read
NORM	L	H	001-111	L	L	Off-board Read

Table 4-1. Data Direction Logic.

The Forced Instruction jumper, on P041, allows free-running the CPU for test purposes. With the jumper in "NORMAL" position, the data out buffers are disabled when the CPU is in a "HOLD" state. These same buffers are enabled when the CPU is busy writing and DBIN is low. When the CPU is reading, DBIN is high and the input buffers are enabled. However, if the read address is below 2000 (hex), the input buffers are disabled to allow data to come from the CPU board itself. At the same time, the output data buffers are enabled for diagnostic testing.

With jumper in "TEST" position, both the input and the output data buffers are disabled. The Forced Instruction Logic buffers (U542 and U351), otherwise in a high impedance state, place 1000 (hex) on the CPU Bus to free-run the 9900 during diagnostics. This forces the CPU to continuously increment the PC as a result of executing JMPO (NOP) instructions.

I/O Address Decoder. A comparator (U171) decodes valid memory addresses between 1000 and 13FF (hex) and valid CRU addresses between 0 and 3FF (hex). The MEM-1 signal at U171 pin 1 selects between memory addresses and CRU addresses. When the signal is high, memory addresses are selected, and the DECODA signal enables the memory. When the MEM-1 signal is low, CRU addresses are selected, and U261 decodes bits A5 through A8 to enable the devices at the CRU addresses.

Four I/O devices are present on the CPU board. Three of these devices are 9902 Asynchronous Communications Controllers (ACCs) and one is a 9901 Programmable Systems Interface (PSI). Each device occupies thirty-two bits of CRU address space as shown in Table 4-2.

DEVICE	TYPE	S/W ADDRESS		H/W ADDRESS	
		HEX	DEC	HEX	DEC
U501	9902 ACC	0 - 3E	0 - 62	0 - 1F	0 - 31
U361	9902 ACC	40 - 7E	64 - 126	20 - 3F	32 - 63
U371	9902 ACC	80 - BE	128 - 190	40 - 5F	64 - 95
U372	9901 PSI	C0 - FE	192 - 254	60 - 7F	96 - 127

Table 4-2. CPU Communication Device CRU Addresses.

The ACCs, like UARTs (Universal Asynchronous Receiver-Transmitters), interface between the CPU and the RS-232C equipment attached to the ports. Unlike UARTs, which usually convert between parallel data words and serial data in RS-232C format, the ACCs convert between serial data on the CRU Bus and serial data in RS-232C format. Because of the similarity, the two terms are sometimes used interchangeably in the 1980 manuals.

The 9902 ACCs (U361, U371, U502) are standard RS-232C full duplex devices. They may be programmed to set the baud rate, stop bits, parity, and timer interval by writing to the Control register. Transmission is initiated when an ACC either issues a Clear to Send (CTS) to a transmitting device, or receives a Clear to Send from a receiving device. It interrupts the CPU (via interrupt level 6 on the 9901 PSI) when service is required while either transmitting or receiving. An error at any time also generates an interrupt. After reading the Status register, the CPU determines the cause of the interrupt and takes appropriate action.

The 9901 PSI (U501) handles all interrupt communication with the CPU and can process up to fifteen interrupts. It also contains a programmable timer. Writing to the interrupt mask register independently masks or enables each line. The PSI samples all interrupts on clock phase-3. If one or more interrupt lines are active and not internally masked in the PSI, the highest priority interrupt level is encoded in binary on lines IC0 through IC3, and an interrupt request is sent to the CPU. The CPU acknowledges the interrupt at the end of the current instruction, and then only if its priority is enabled in the CPU Status register. Level 1 has highest priority and level 15 the lowest.

The timer is programmed through the interrupt register when the PSI control bit is set. When this bit is reset, the timer interrupts on level 3 when its interval has elapsed.

CPU MEMORY (Diagram 2D)

The CPU board (A10) has 4K words of memory physically located on the board. The CPU memory consists of 2K words of Read-Only Memory (ROM) and 2K words of static Random Access Memory (RAM). The ROM contains power-up diagnostics, memory mapping initialization routines, and other utility routines. The RAM provides workspace area for the CPU. The board also includes decoder circuits that enable the memories at their appropriate addresses.

CPU ROM. The ROM array is made up of two 2K-by-eight-bit memories (U031 and U032) which together can store up to 2K sixteen-bit words. The eleven low-order bits, A0 through A10, address a specific word within the pair of ROMs.

ROM Decoder. The ROM Decoder enables the CPU ROM to be read for addresses 0000 - 0FFF (hex). These addresses form Block 0 in the memory map.

Address and data read information is decoded by NAND gate U142A to generate the chip select signal (CS) for the CPU ROM. The four high-order address bits, A11CRU through A14P, address the ROM section of memory. Address lines A14P through A12P are decoded by the Data Direction Logic shown on schematic diagram 2A. The resulting EXTADR

signal, when high, selects the CPU memory. The A11CRU line, when low, selects the CPU ROM. The DBIN signal enables the gate for a read operation.

The jumper on P015 provides for future expansion to a ROM capacity of 4K sixteen-bit words. One half would be used for normal operation. The other half would be used for diagnostic programs. The mode that the CPU board would operate in is selectable by this jumper. The jumper is left in the normal position for this 1980 version.

CPU RAM. The RAM Array consists of eight 1K-by-four-bit static memories in two banks of 1K words each. The low bank (U221, U231, U232, U241) addresses 1K sixteen-bit words between 1800 and 1FFF (hex). The high bank (U121, U131, U132, U141) addresses 1K words between 1000 and 17FF (hex) for a total read/write memory capacity of 2K words on the board. The ten lowest address bits, A0 to A9, address a specific half-byte within a chip.

RAM Decoder. The main component of the RAM Decoder is U242A and B. Anytime the CPU Address Decoder detects Block 1 addresses 1000 - 1FFF (hex), it selects the CPU RAM. If a write cycle is in progress, U251C will not enable the memory chip until it receives a write enable (WE) pulse. Address bit A10 selects the upper or lower banks of memory; RAM HIGH is enabled if A10 = 0, and RAM LOW is enabled if A10 = 1. The RAM Select jumper on P080, with U161A, can reverse this for diagnostic purposes by setting the jumper to position "T".

Diagnostic Aids (Diagram 2C)

Single-Step Logic. The Single-Step Logic block allows sequencing the CPU one cycle at a time for hardware and software troubleshooting. The block is enabled when the jumper on P051 is in position "T". This sends a Not Ready signal to the processor on clock phase-3. Pushing debounced switch S050 latches a single-step request into U152B. At the next phase-3 pulse, the request is passed through U152A and U452D. It forces the CPU into a Ready state for one clock period. As the CPU executes one cycle, U152A feeds back to U152B to preset it. This causes U152A on the next phase-3 clock to force the CPU not ready again and to wait for S050 to signal another single step cycle.

Signature Analyzer Control. This block generates control signals used by a signature analyzer. The CKON and CKOF signals drive a set-reset flip-flop, U061C and D, to produce the Stop and Start signature analyzer control signals. The Memory Enable (MEM) and Ready signals control J-K flip-flop U172B, clocked by the Phase-1 CPU clock, to produce the Data Available Clock (DAVCK) signal.

External CRU Instruction Decoder. This block decodes the external instruction signal addresses generated by the CPU. Three-to-eight line decoder U271 generates the CKOF, CKON, CRUCKF, and LREX control signals.

Control Line Buffers. These buffers feed control signals to the system bus and to test pins to make them available for monitoring and signature analyzer control. Buffers U731 and U641 provide memory control and refresh signals and CRU data and clock signals to the system bus. Buffers U051 and part of U001 provide control, clock, and CRU data to test pins on P061 for monitoring and signature analyzer use. The signals fed to the system bus by U731 are gated by the HOLDA signal.

EXTENDED MEMORY CONTROL (Diagram 2B)

Extended memory mapping expands the addressing capability of the CPU. The CPU has fifteen address lines that can address up to 32K words. The Extended Memory Control circuits increases this to nineteen address bits and 512K words of addressing space.

The original 32K-word addresses can be re-assigned, or mapped, at 2K increments within the 512K address space. The increased address space allows increasing the total memory size of the instrument. The CPU board contains two memory maps, either of which can be selected to set the mapping addresses. The maps can also be programmed to enable writing to one or both of them.

Extended Memory Map. The map circuitry provides the eight most significant addresses, A11 through A18, for a 2K block within the 512K word address space. The eleven least significant bits, A0 through A10, locate a specific word within the block. This mapping scheme is demonstrated in Fig. 4-3.

There are two memory map arrays. Software execution speed can be enhanced by switching between the two maps. This can be achieved by changing one CRU bit.

Each map array consists of two 16-by-4-bit RAMs configured as a 16-by-8-bit memory array. The data output forms the eight most significant bits, A18 through A11, of the Extended Memory addresses on the system bus. The memory array acts as an address table pointing to sixteen main memory blocks. The four most significant CPU address bits, A14P through A11CRU, address the sixteen locations in the table. For example, referring to Fig. 4-3, bit pattern 0101 on the CPU lines addresses location 5 in the table, and the contents of location 5, namely 10001011 (hex 8B), form the main memory address pointing to memory block 8B. The net effect is that the CPU actually addresses block 8B when it 'thinks' that it is addressing block 5.

The actual block that is addressed by a given pattern on the CPU address lines can be changed by loading new data in the corresponding location in the table. The high byte of the Data Bus writes into Map 0 (U621 and U631). The low byte of the Data Bus writes into Map 1 (U521 and U531).

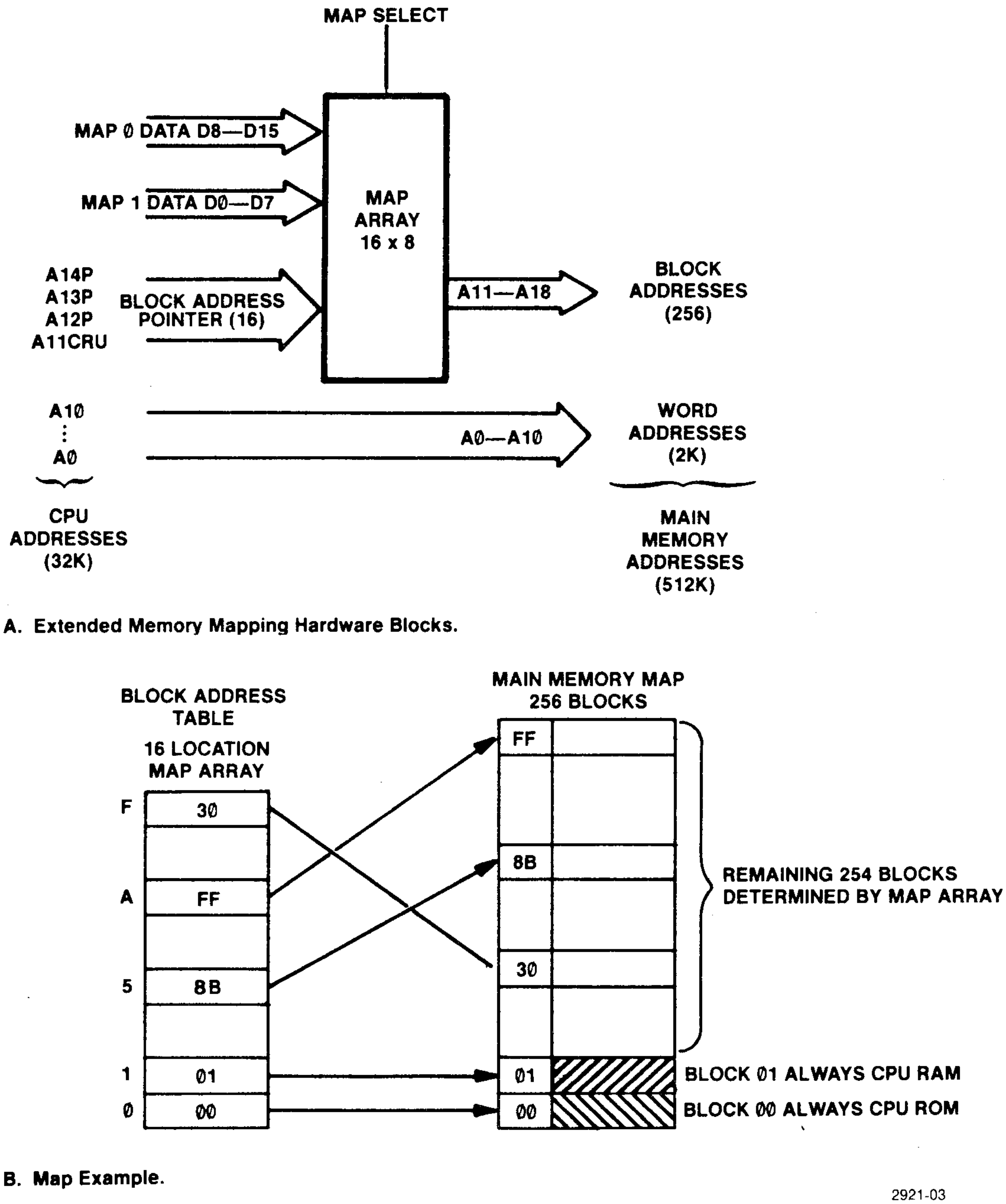


Fig. 4-3. Extended Memory Mapping.

Memory Address Switch. The Memory Address Switch, U511 and U611, supplies addresses to the map array in three modes: Normal, Map Load, and Map CRU Read. The Normal Mode uses address lines A14 through A11 to select a starting block address for memory access as described under Extended Memory Map. The Map Load mode programs a new map configuration by writing new map addresses into the map array addressed by lines A3 through A0, rather than by A14 through A11 as in the Normal Mode. The Map CRU Read mode is used by diagnostic purposes to verify the contents of an existing map. In this mode, the array is addressed by A3 through A6. The Memory Map CRU block multiplexes the the eight map address bits onto the CRUIN line.

Mode Selection. The Map Select CRU Address Decoder (U112) and the Map Select circuitry decide which extended memory operation is requested. Table 4-3 describes the conditions necessary to force the Memory Address Switch out of the Normal Mode.

FUNCTION	ADDRESS (HEX)	RD/WR LINE	NOTES
Load Address Latch	100 - 10F	write	1
Map CRU Read	100 - 1F0	read	2
Map Load	1000 - 101F	write	3
Memory Map	2000 - FFFF	either	4
Memory Map	0000 - 1FFF	either	5

NOTES:

1. CRUOUT & CRUCLK latch data
2. Data input through CRUIN
3. Normal memory write operation
4. Extended memory operations
5. CPU memory operations

Table 4-3. Modes for Extended Memory Map.

The Memory Map Override circuit (U301A,B,C, and U201B), along with U212A and B in the Buffer Switch block, decides in which mode the Memory Switch is to operate. The Normal Mode is used for continuous memory access. When the Map Load or Map CRU Read modes are requested, the Switch changes modes.

Setting Map Parameters. Writing to CRU locations 100 through 10F (hex) loads the Address Latch (U101). This allows either or both memory maps to be disabled for reads or writes. It also sets the status lights on the front panel. Bit Q0 enables one map to be read while disabling the other for reading. Bits Q1 and Q2, when set, enables Maps 0 and 1 respectively for writing. The front-panel LEDs are set depending on the state of bits Q3 through Q7. Address and control information is summarized in Table 4-4.

ADDRESS (HEX)	BIT SET/RESET	CONTROL LINE	FUNCTION
0100	Q0=0	CE1(L)=0 CE2(L)=1	Read protect map 1
0100	Q0=1	CE1(L)=1 CE2(L)=0	Read protect map 0
0102	Q1=0	W1(L)	Write protect map 0
0102	Q1=1	W1(L)	Write enable map 0
0104	Q2=0	W2(L)	Write protect map 1
0104	Q2=1	W2(L)	Write enable map 1
0106	Q3	I/O FAILURE	Set front panel LED
0108	Q4	BUSY	Set LED
010A	Q5	SAMPLE	Set LED
010C	Q6	DS11	Set LED
010E	Q7=0		Normal
	Q7=1	DS13	Set LED

Table 4-4. Address Latch Control.

Map Writing. The memory map is loaded by writing into the sixteen memory word address locations between 1000 and 101E (hex). Writing to the msb of the memory locations loads map 0, if enabled, and writing to the lsb loads map 1, if enabled. When WE (Write Enable) is active, the phase-4 clock generates a very short write pulse to write the data into the enabled map.

Map CRU Read. The contents of the memory map array may be read one bit at a time from CRU addresses 100 through 1FF (hex). The address interval between eight-bit bytes is therefore 10 hex. Address latch bit Q7 must be set to enable the CRU Read mode. To begin a read cycle, the phase-3 clock causes the memory switch to address the desired block in the map with bits A3 through A6. Feedback from U301B locks the cycle until the next phase-2 clock returns it to the Normal Mode. The low order bits, A0 through A2, determine which of the eight mapped address bits, A11 through A18, to read from the eight-to-one Multiplexer (U612) into the CRU input. Timing for a Map CRU Read operation is shown in Fig. 4-4.

Address Exception. The Block Buffer Switch (U712 and U721) forces address bits A11 through A18 to 00 or 01 (hex) regardless of the contents of the memory map. To enable the buffer switch, memory blocks zero or one (when A12 through A14 are all low) must be addressed. Also, the CPU must control the bus (i.e. - not be in the HOLD mode). In this way, the first 4K addresses, 0000 through 1FFE (hex), access the memory on the CPU board. All other memory block addresses continue to access external memory.

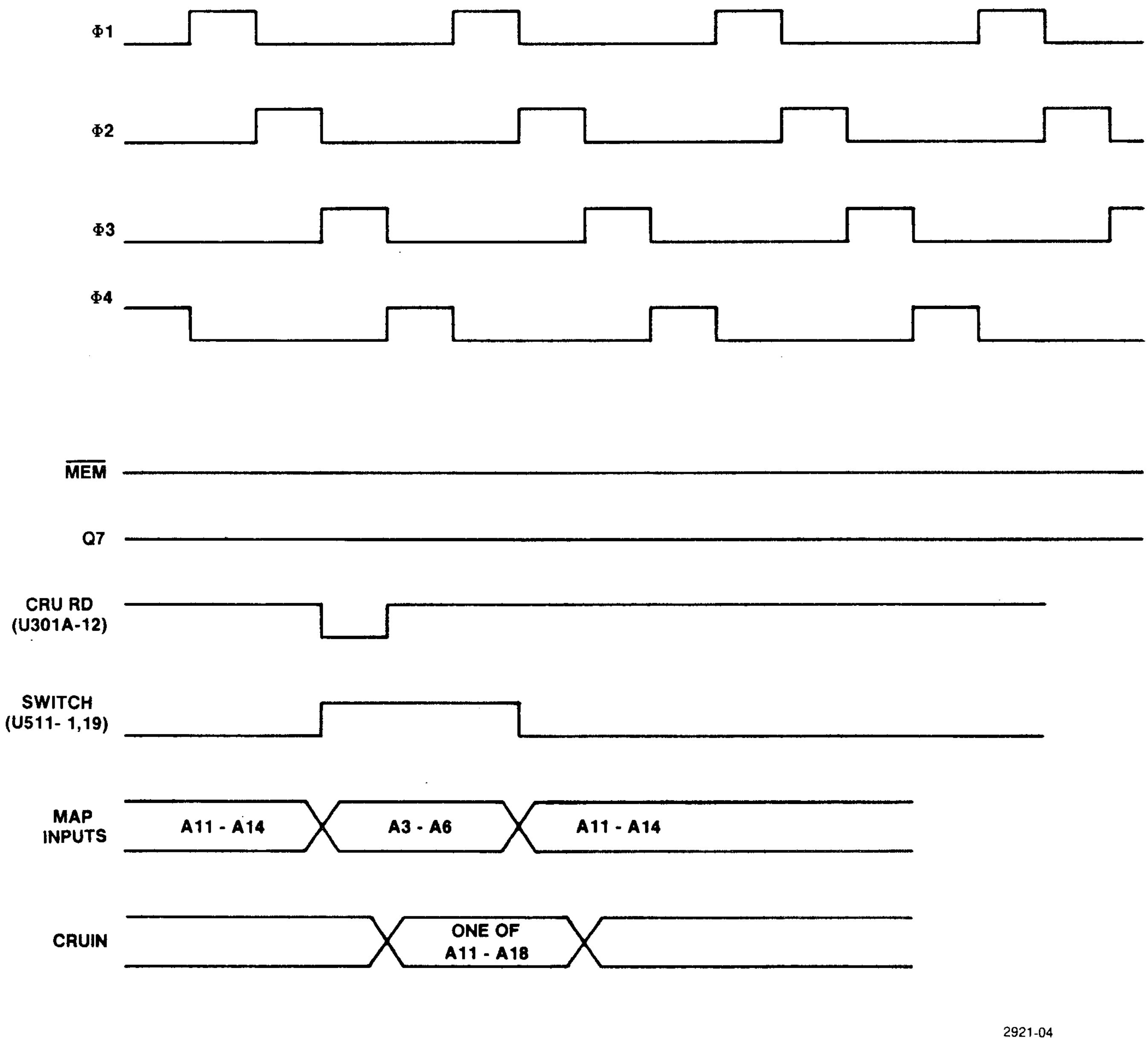


Fig. 4-4. Map Read CRU Timing.

DYNAMIC RAM DRIVE (Diagram 2C)

This functional block controls normal and refresh memory accesses to the dynamic memory. The circuitry consists of a Dynamic RAM Access, Refresh Counter, and CPU Not Ready Indicator.

NOTE

The Acquisition Memory (A18) is also refreshed by the Memory Controller (A20).

Valid Address. The Not Ready Inhibit circuit is a ROM decoder (U512 shown on Diagram 2B) that decides which addresses reference a dynamic RAM location. It accepts the five high-order bits, A14-A18, that divide the 512K-word address space into thirty-two 16K-word blocks. When the NRI line is high, Ready transitions from sources other than the CPU board are inhibited.

Memory Access. The Dynamic RAM Control circuit generates the RAS, CAS, Row/Col, and Refresh memory control signals. The circuit is enabled when a valid memory location is addressed. This is determined by checking that the NRI line is high, HOLDA is inactive, the Memory enable signal is active, and a Refresh operation is not taking place.

During each memory operation, the circuit sends the required control signals to the memory boards to strobe the row and column address. The RAS signal strobes on the phase-4 clock to allow the memory circuits to latch the row address. The Row/Col selection signal switches on the phase-1 clock. Finally, the CAS signal strobes on the phase-2 clock, latching the column addresses. Fig. 4-5 shows a timing example for an active memory cycle.

Refresh. Between memory operations the dynamic memory circuits must be refreshed to maintain the stored data. A Refresh signal is strobed out on the phase-3 clock. Then a RAS signal is strobed on the following phase-4 clock. These signals control the operation of the refresh address counter and row multiplexers associated with the boards containing dynamic RAM. One row of RAM is refreshed each refresh cycle. Fig. 4-5 shows the refresh timing.

The Refresh Counter on the CPU board, U571 and U671, keeps track of time elapsed since the last refresh. The counter runs continuously from a preset initial count. It can be cleared by an LREX instruction from the CPU so that a known starting state can be defined for signature analysis.

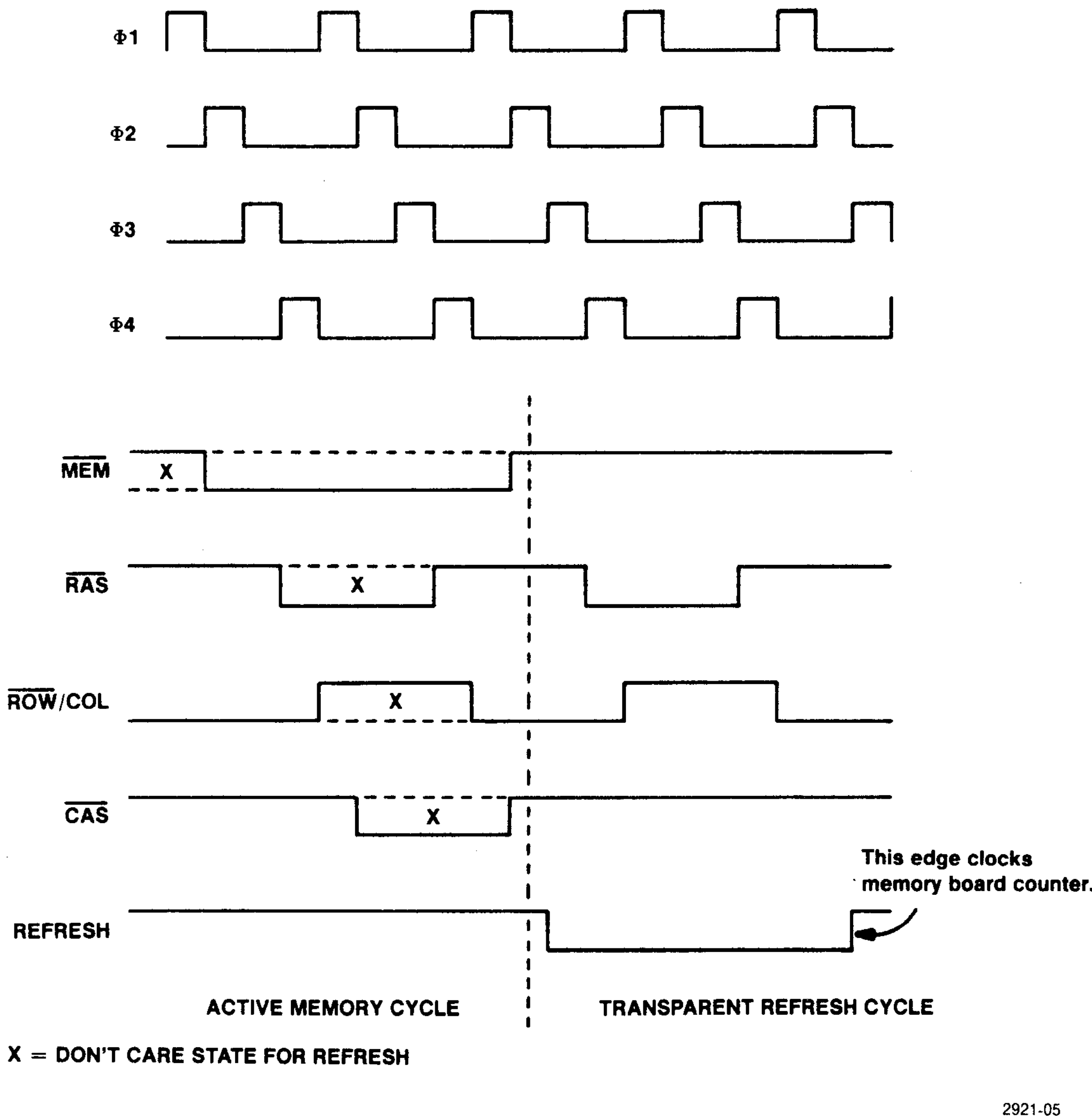


Fig. 4-5. Dynamic RAM Control and Refresh Timing.

Refresh Modes. The two refresh modes are transparent refresh and forced refresh.

For transparent refresh, a gate is opened for sixteen CPU clock cycles. If a memory access occurs while the gate is opened, then a transparent refresh is initiated by the trailing edge of the Memory Enable (MEM) signal. This refreshes the memory between memory cycles, and thus does not affect CPU execution times. Only one transparent refresh is allowed by the circuitry during the gating time, regardless of the number of memory accesses.

A forced refresh cycle is triggered at the end of the gate if a transparent refresh has not occurred during the gate time. In this mode, U471C enables REFRESH to be clocked active by phase-3. The REFRESH signal always lasts for two clock periods and inhibits the CAS signal through U552C.

The period of time between successive refresh gates is sixteen clock cycles. The average time between refreshes does not exceed thirty-two clock cycles.

Ready Logic. The Ready Logic circuit informs the CPU and the rest of the 1980 when one operation should prevent another from starting. There are several ways it does this. If the CPU wants to access memory during refresh, U461B pulls READY inactive and the CPU waits until refresh is completed. At the same time, U452B tells the Main Interface board (A50) that a NOT READY has been issued. This is for possible future use. Latch U541B synchronizes the Not Ready signal with phase-4, and U461A passes the Not Ready state to the CPU. Finally, U452D forces the CPU not ready between single-step cycles.

ROM BOARDS

The ROM boards hold the firmware that contains the 1980 Operating System and the measurement applications programs. This description discusses the ROM boards in general, and specifically, the Operating System ROM board (A28) as an example of all ROM boards. Fig. 4-6 shows the block diagram.

The circuit boards are basically the same for each ROM assembly. Address jumpers select the proper address for each board; and the ROMs contain different programs as required. The number of ROMs and FPLAs may differ between assemblies, depending upon their individual requirements.

The Operating System ROM board (A28) contains the operating system firmware. The 1980 operating system provides for efficient use of the system resources, and insulates the operator from the details of the hardware operation. The operator controls the hardware through the operating system by using TEK ANSWER BASIC commands. The operating system translates the TEK ANSWER BASIC commands into machine language for the 1980.

The Applications ROM boards contain the measurement program firmware. The Applications Option determines which set of programs are loaded on the board or boards. Options with large programs require more than one board.

Input Buffers

This block buffers the A0-A15 address lines and the phase-one Clock signal. When the FPLA Patch issues the Flag signal, the A4-A11 address buffers are shut off. The FPLA Patch then generates those addresses for the Patch ROMs.

The addresses are fed through several sets of buffers to minimize capacitive loading of the memories.

Memory

The ROM boards have the capability of holding 64K words of read-only memories (ROMs). These ROMs may be of several types. Jumpers on the board select proper addressing for each type of ROM. Sample settings for each type of ROM are shown on the schematic diagram. The ROMs may be of the 4K-by-8-bit format, such as 2732 devices or 2K-by-8-bit format, such as 2716 devices, might be used in certain locations. These devices may be ROMs, PROMs (programmable ROMs), or EPROMs (erasable PROMs) that are factory-programmed. They are all treated here as ROMs since they are not intended to be reprogrammed.

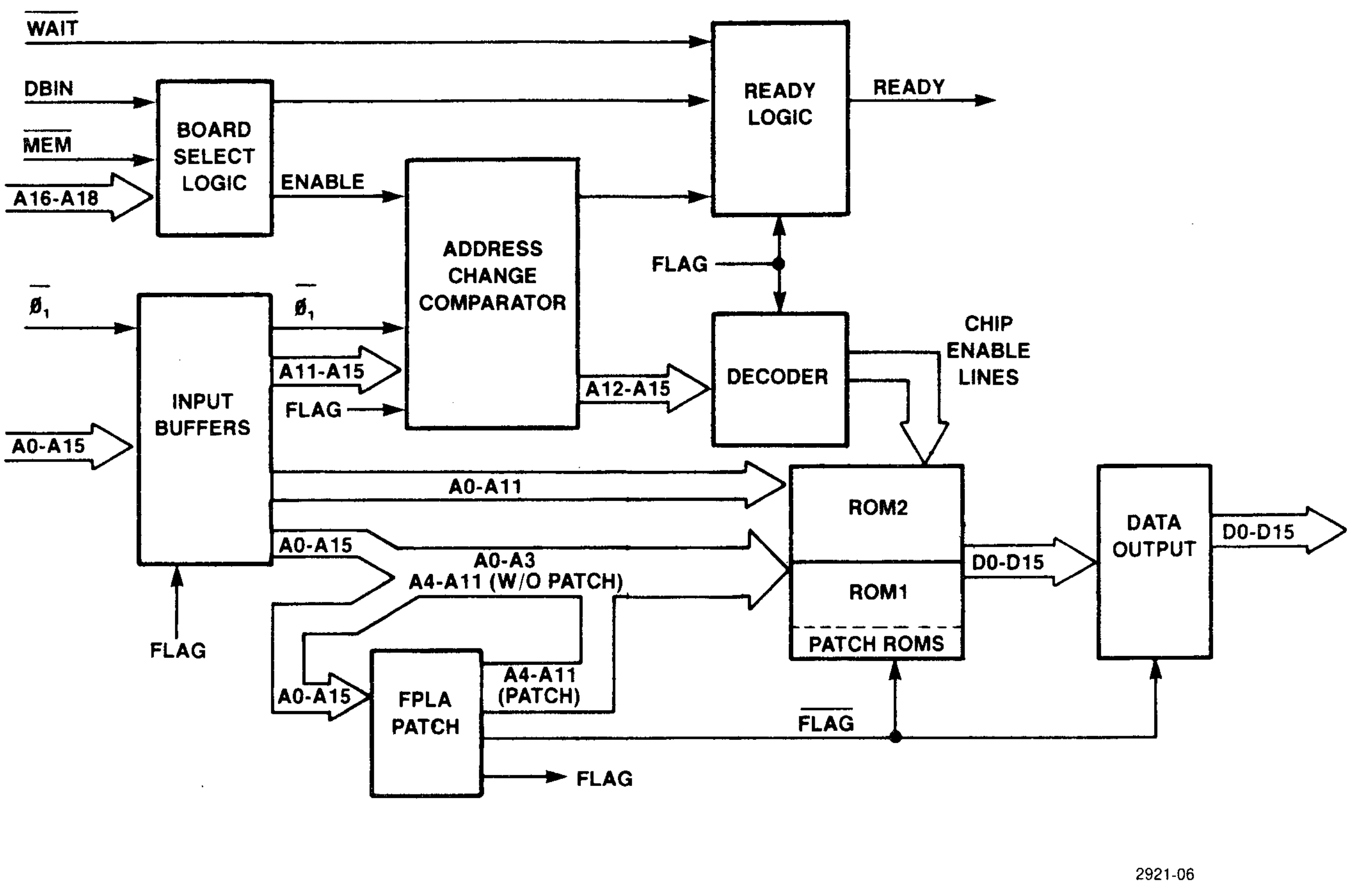


Fig. 4-6. ROM Board Block Diagram.

The ROMs are paired to form 16-bit words, so that two 4K-by-8-bit ROMs can contain 4K words of data. Each ROM in a pair is enabled and addressed identically. One ROM contains the MSB (most significant bit) byte (8 bits) of the data word, and the other ROM in the pair contains the LSB (least significant bit) byte of the data word. So, at any particular address, the LSB ROM will present D0 through D7 and the MSB ROM will present D8 through D15 to form the 16-bit data word.

In the case of the 2K-by-16-bit word pairs, where used, the 2K words occupy the same memory map space as the 4K-by-16-bit pairs, so only half of the memory map space for that block is usable. In this case, address line A11 is not connected, therefore, data is repeated at addresses affected by A11. For example, information that resides at software location 20000 (hex) repeats at location 21000 (hex), and data at 20002 (hex) repeats at 21002 (hex).

Board Select Decoder

This block enables other circuits on the board when the board is selected. The block decodes the Memory Control signals and address bits A16 through A18 to detect when the board is addressed.

Boards are interchangeable in different ROM board positions, but the troubleshooting procedures in the Maintenance section and Diagnostics Manual (1980 Service, Vol. 2) are keyed to specific addresses being in certain board positions. Jumpers on P411 and P412 set the exact address range to one of three software address ranges available. The address ranges (hex) and their corresponding board position assignments are:

20000 - 3FFFE (Position 4)
40000 - 5FFFE (Position 8)
60000 - 7FFFE (Position 9)

The Operating System ROM board (A28) is assigned to software addresses 20000 through 3FFFE (hex) and is installed in board position 4. The other two address ranges are used for Applications ROM option boards. They are installed in board position 8 or 9. See the Options section of this manual for address and board position assignments of the various Applications ROM boards.

Ready Logic

This block generates a not-Ready signal when a new 2K-word ROM address block is selected. This initiates a Wait state in the CPU, allowing extra time to compensate for delays in enabling the new memory block. If the next ROM address is on the same board and is in the same address block, the not-Ready signal is suppressed because the original bank is still enabled.

Address Change Comparator

This circuit latches the ROM bank address lines, A11 through A15 and the Flag signal from the FPLA Patch circuitry, and it detects any change of the input lines from the last time the board was accessed. The Ready circuitry is enabled only if the conditions have changed. This allows addressing the same bank of ROMs without having the access delay required by the Wait state.

Decoder

This block decodes the latched addresses A12-1 through A15-1 to activate one of sixteen enable lines for the ROM banks. Each signal enables a pair of ROMs that occupy the enabled address space.

If the Flag signal is asserted, the Decoder is disabled and the Patch ROMs are enabled.

Data Output

This block enables the data onto the Data Bus. A Data selection logic circuit enables data from half of the addressable memory through one pair of buffers, and the data from the other half of memory through another set of buffers. This is to minimize the capacitive load on the memories.

FPLA Patch

The ROM boards may be updated or otherwise modified through patch programs enabled by FPLAs (Field Programmable Logic Arrays). The patch circuitry detects ROM addresses that are to be patched around, disables the addresses to the ROMs, and generates addresses for patch ROMs that contain the replacement data. This circuitry also enables the Patch ROMs during a program patch.

Up to four FPLA devices may be used on any board, depending upon the number and sizes of patches required. If no patch is required, there will be no FPLAs or Patch ROMs installed on that particular board.

PATCH ROMs

This pair of ROMs contains any program patches called by the FPLA circuitry. They are addressed by the FPLA Patch circuitry when a patch is required, or by normal Address Enable signals from the Decoder for portions of the ROMs that do not contain patches. On boards that do not require a program patch, the Patch ROMs are accessed through normal addressing, and used as normal program memory.

DYNAMIC RAM (A14)

The Dynamic RAM board (A14) provides random access memory (RAM) as user or program memory; as buffer space for the I/O ports, NVM files, and applications ROM files; and to store changeable data, such as information about variables. Fig. 4-7 shows a block diagram of the board.

The circuits include the Address and Control circuits shown on Diagram 4A and the memory circuits shown on Diagrams 4B, 4C, and 4D. The Address and Control circuits include the Board Select Decoder, Memory Control, Address Switch, and Refresh Counter. The memory circuits include banks 1, 2, and 3, and the Data Buffers.

The memory is addressed via the Address Bus. Addresses A0 through A13 select individual words of memory, and addresses A14 through A18 select the board and memory bank.

The Data Buffers transfer data to and from the Data Bus. Control lines provide memory refresh, data direction, address direction, write enable, and memory enable.

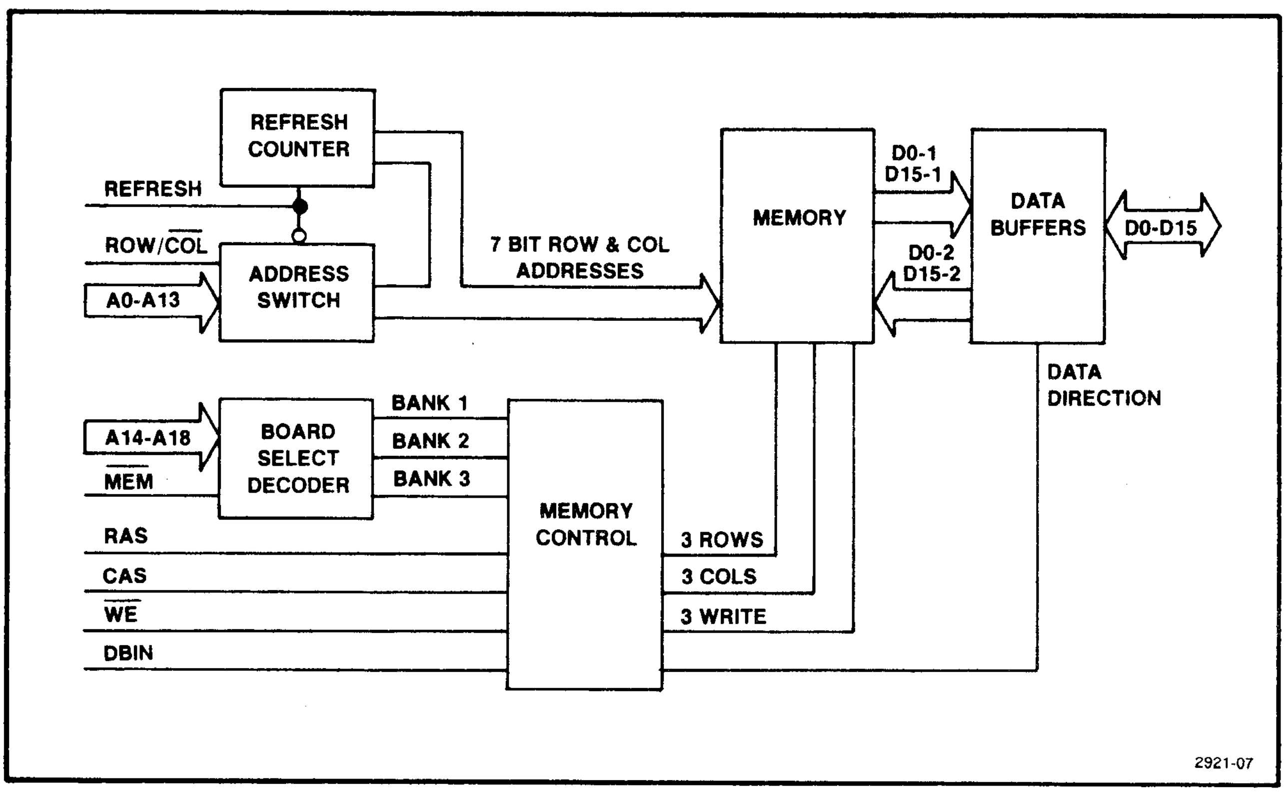


Fig. 4-7. Dynamic RAM (A14) Block Diagram.

Memory

The memory provides interim storage for operational data. The board contains 32K words of memory, and is capable of 48K words. Banks 1 and 2 each contain 16K words. The additional 16K words of memory and associated parts allocated for bank 3 are not loaded, but are shown on Diagram 4D and the other board diagrams as noted. The bank 3 parts are shown for information only.

The memory is dynamic random access memory. This means that the memory is refreshed to maintain stored data, and that data can be directly written into or read from any address.

Data Buffers

The buffers in this block switch the data to and from the Data Bus. When the address is in the Dynamic RAM address range and the DBIN signal is active, the Data Output Buffers are enabled. The Data Input Buffers are always enabled.

Board Select Decoder

This block detects memory addresses that are in the board range, and decodes those addresses to enable the appropriate memory bank. Software addresses 08000 through 0FFFE (hex) enable Dynamic RAM 1 (bank 1), and addresses 10000 through 1FFFE (hex) enable Dynamic RAM 2 (bank 2). Dynamic RAM 3 is not loaded on the board, and enable signals are not generated for it.

Memory Control

This block provides RAS (Row Address Strobe), CAS (Column Address Strobe), and Write enable gating for the memory.

The RAS (Row Address Strobe) signal is gated by the Bank enable signals from the Board Select Decoder block. This enables memory only in the selected bank. The REFRESH signal gates the RAS signal through to all banks of memory for "RAS-only" refresh.

The CAS signal is buffered (not gated) to provide the Column enable signals.

The WE (Write Enable) signal is gated to all banks by the Board Select circuit.

Address Switch

This block separates the fourteen-bit memory address into two seven-bit row and column addresses. Row and column addresses are latched by the memories to provide a cell location. When the ROW/COL line is high, row address lines A0 through A6 address the memory. When the ROW/COL line is low, column address lines A7 through A13 address the memory.

Refresh Counter

This circuit addresses the memory. During a refresh operation, both the row and column address buffers are disabled, and the memory address is generated by the Refresh Counter. Each cycle of the REFRESH signal increments this counter, refreshing a new row each time. Refresh cycles occur between memory cycles, thus appearing transparent to the CPU. When not in a refresh operation, the counter output is disabled.

When the jumper on P617 sets the Refresh Counter for Test conditions, the LREX signal from the CPU board clears the counter as required to make the address pattern repeating and synchronous with the signature driver program.

NON-VOLATILE MEMORY (A16)

The A16 NVM assembly provides non-volatile memory and a Real-Time Clock. The memory stores data that may be required to change (such as the password, calibration constants, and Real-Time Clock reference information), and it allows the user file storage area. The Real-Time Clock acts as a calendar and 24-hour clock, and provides a time reference that may be used in various ways (such as time-scheduled program operations and simply showing the current date and time). Fig. 4-8 shows a simple block diagram of the board.

The memory is addressed by the Address Bus, and memory data is transferred over the Data Bus. The NVM memory map addresses are from 04000 to 07FFE (hex). Various control signals also interface with this board. Address lines A0 through A18 address this board. Lines A18 through A13 select the board when the address is within the allocated address range. Lines A12 through A10 are used to select one of eight 1K-word memory banks arranged in two units of four banks each. Also, lines A9 through A0 address the individual word locations in the selected bank.

The Real-Time Clock operates from an internal crystal reference oscillator, or may be driven by an external 1 MHz reference signal. The clock circuits are addressed by the Address Bus, and clock data is transferred over the CRU Bus.

Batteries provide backup power for the NVM and Real-Time Clock circuits. During normal operation, the power supply charges the batteries. When instrument power fails or is interrupted, the non-volatile memory is retained, and the clock continues counting.

The NVM board CRU address assignments are from 0400 to 0480 (hex). This includes the Real-Time Clock data and NVM Status data.

Detailed memory and CRU address maps are located in Appendix C of the 1980 Service Manual, Vol. 2 - Diagnostics and Calibration. Device locator maps (with reference to memory and CRU addresses) are found in Appendix D of the same volume.

MEMORY (Diagram 5B)

The board contains 8K (K = 1024) sixteen-bit words of non-volatile memory. The memory consists of thirty-two 1K-by-four-bit CMOS memory devices. These devices are organized in banks of memory, and the banks organized in units of memory. This description explains the organization of the memory from the board level, through the unit and bank levels, down to the chip level. Fig. 4-9 shows block diagrams of sections of the memory at the different levels.

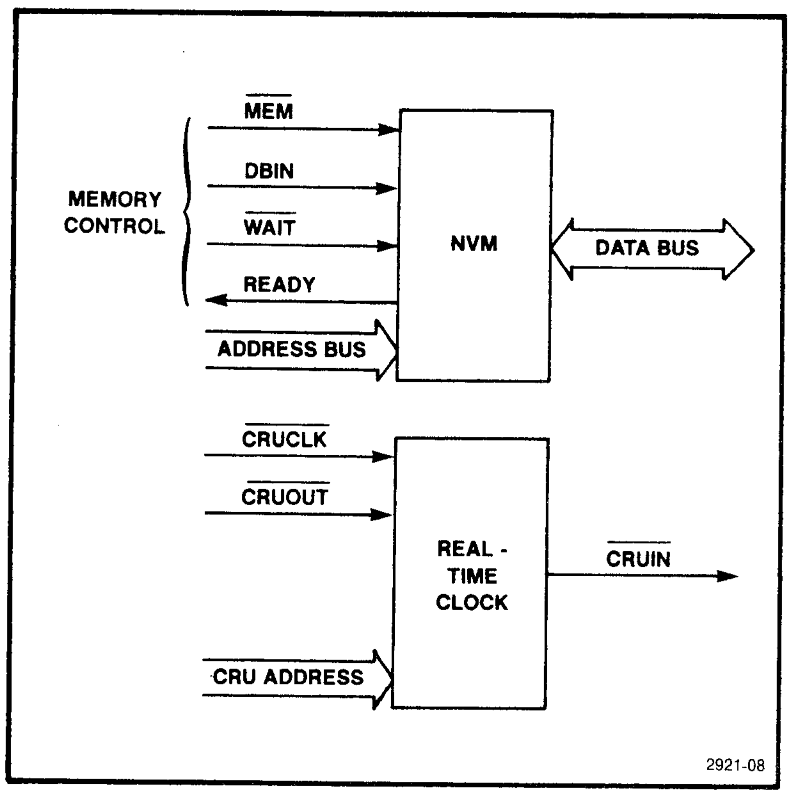


Fig. 4-8. NVM (A16) Block Diagram.

The memory is divided into two major units of 4K words each. These are addressable by software, using the names "NVM0:" for unit 0 and "NVM1:" for unit 1. Unit 0 memory map addresses are from 04000 through 05FFE (hex), and unit 1 addresses are from 06000 through 07FFE (hex). Fig. 4-9A shows the memory units. The first sixty-four words of unit 0 are addressable only by the system. The rest of the data in unit 0 is write-protected using the front-panel key. The data in memory unit 1 is not write-protected.

Each 4K unit consists of four banks of 1K words. As an example, Fig. 4-9B shows the block diagram of memory unit 0. Memory enable lines access the individual banks, and Address Bus bits A0 through A9 select the memory words within each bank. Write enable lines allow data to be written into the memory.

Each bank consists of four 1K-by-four-bit memory chips. Fig. 4-9C shows the chip-level block diagram of bank 0. The enable, write, and address lines are identical to the inputs of all four chips in the bank. Each of the four chips have four data bits, forming the sixteen-bit data word.

If instrument power fails or is interrupted, the chip and write enable lines to the memories are disabled (held high), and battery power keeps the data stored.

NVM BUFFERS AND CONTROLS (Diagram 5A)

The circuits on this diagram control the memory; power the memory circuits; isolate the battery powered circuits; and buffer the address, data, and control lines.

Address and Control Buffers

These buffers isolate the memories and distribute the load from some of the control lines and address lines. Separate buffers isolate memory address lines A0 through A9 to Unit 0 and to Unit 1, thus reducing capacitive loading on the individual lines.

NVM Board Select

This block detects memory access by the CPU (A10), and generates the necessary responses. The block monitors the memory enable signal (MEM) and the Address Bus. When a valid NVM address is detected and the MEM signal is active, this block enables the Data Bus Buffers and initiates an extension of the memory access time to allow for NVM board delays.

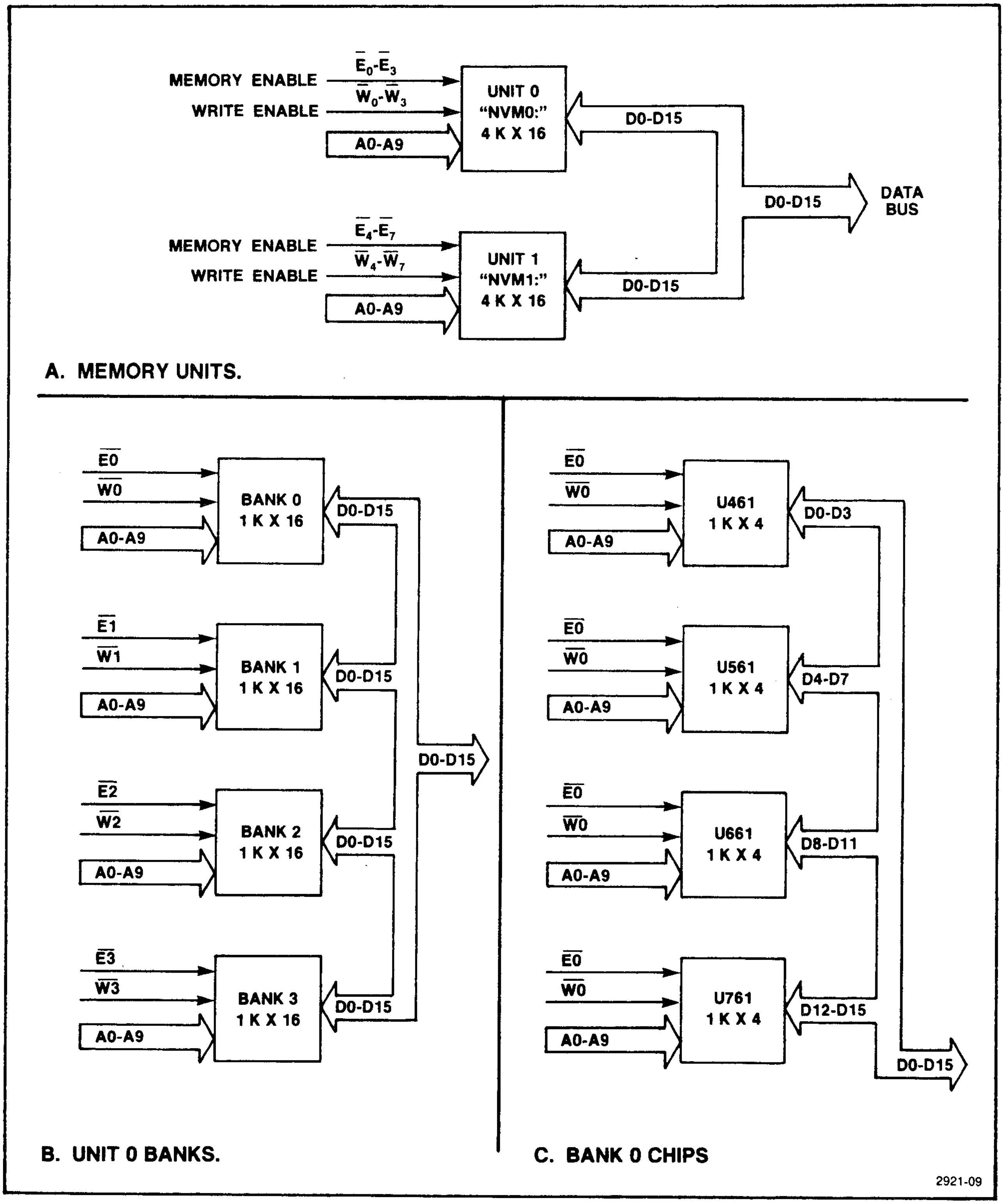


Fig. 4-9. NVM Organization.

A comparator, U920, checks for a valid address on lines A13 through A18. The valid software address range is 04000 through 07FFE (hex). This occurs when A12 is low, A13 is high, and A14 through A18 are low. This corresponds to the upper two words of the software address range, 04 through 07 (hex). The open-collector outputs of the comparator and U721B form a wired-and circuit. Both outputs are held low unless the MEM signal is active and unless the address is in the proper range. When both conditions are present, U810D enables the Data Bus Buffers, U881 and U781.

At each change of address, two complete memory cycles rather than one are allowed for data transfer. Allowing extra time compensates for delays on this board in enabling the memory. When the NVM is selected, U721A sends a not-READY signal (low) to the CPU. At the next positive transition of the phase-3 clock, the CPU sends a WAIT signal (active low). This causes U721A to send the READY signal (high). At the following phase-3 clock positive transition, the WAIT state changes, allowing the NVM board sufficient time to enable the addressed memory location before reading or writing data.

Bank Enable

This circuitry generates separate enable signals for each of eight 1K banks of memory. Address lines A10, A11, and A12 select which of the eight signals is active for any particular address.

While the memory enable signal (MEM) from the CPU is active, a signal from J-K flip-flops U711A and U711B enables eight-line demultiplexer U720. The memory enable signal provides the data input to the demultiplexer. When the data input is high and the demultiplexer is enabled, the address-selected output goes high. All other demultiplexer outputs are low.

Write Protection

This block protects the user-writable portion of the unit 0 memory from accidentally being written into. The circuit generates the key-switch selected memory write enable signal for unit 0 (MKY). When the key-switch is set for NVM WRITE ENABLE, the signal is inactive (low), except when the lower sixty-four words in bank 0 reserved for system use are selected. With the WRITE ENABLE switch OFF, unit 0 memory cannot be written into by the user. When the key-switch is set for NVM WRITE ENABLE, the MKY line is always active.

Comparator U600 decodes the first sixty-four words of bank 0 in unit 0 of the memory. Bank enable line C0 detects bank 0, and address lines A6 through A9 detect the first sixty-four words of that bank.

When the key is set for NVM WRITE ENABLE, the KEY-A line goes low, causing U501B to set the MKY line high, thus bypassing the comparator and enabling writing into unit 0. Also, U810D inverts the KEY-A line to form the memory key signal (MEM KEY) that is sent to the status flag multiplexer shown on diagram 5C. The diagnostics detect when NVM WRITE ENABLE is OFF (write-protected mode), and reports a software error if an attempt is made to write into the protected memory.

The memory in unit 1 (NVM1:) is always enabled to write by the MKY2 line that is held high.

NVM Power Supply

This block supplies power to the non-volatile memory and associated circuits. Battery backup power is available if the normal instrument power is interrupted. During normal operation, the instrument power supply drives this block, and supplies enough power to charge the battery. While in the STANDBY mode, the Power Fail line from the instrument power supply supplies power to maintain the memory. When instrument power is interrupted, the battery supplies power to maintain the memory.

During normal instrument operation, the instrument power supply (A60) provides +5 V to this block. Zener diode VR680 causes Q680 and Q581 to saturate. The +V2 supply is created as Q680 pulls down on the base of Q681, causing that transistor to pass current from the +5 V supply to the CMOS circuits in the memory. This current also charges battery BT590 through R388. A low level at the collector of Q581 causes a high level from U420C that indicates that the instrument power is not interrupted.

When the instrument is in the POWER STANDBY mode, the +5 V power supply goes low, shutting off transistors Q680, Q681, and Q581. In this case, the +V2 supply is provided by the Power Fail line from the Power Supply (A60). The Power Fail line supplies enough current to maintain the memory so that the battery is not discharged, but not enough current to continue charging the battery. The input of U420C is pulled high and the output goes low, giving the power interrupted signal (PI) to the the Power Fail Isolation gates.

In the case of power interruption (no power applied to the instrument, as in a power failure or with the rear-panel POWER switch OFF), the Power Fail line also goes low. This shuts off CR891, and the battery supplies power to maintain the memory.

The NVM Battery Switch, S087, allows disconnecting the battery from the circuit. This may be done to store the board for long periods of time, or to avoid damage to the components when shipping the board.

If the memory data is to be retained, either the instrument power must be in STANDBY or ON, or the battery must be charged and the battery switch on.

Comparator U481 monitors the battery voltage. If the voltage goes below +3 V, the comparator gives a low output. This lights the Battery Fail indicator, DS060 shown on diagram 5C, and flags the error to the instrument diagnostics. These indications can be caused by low battery voltage, battery failure, or the battery being switched off.

Power Fail Isolation

This block provides the write and chip enable signals to the memory, and assures that the memory is not accessible when the instrument is in the STANDBY mode or one of the power failure modes. The battery backed-up CMOS gates disable the write and chip enable lines during power failure.

The write enable signals, W0 through W7, are formed after checking the power interrupted (PI) status, the position of write-protect key (if necessary), and the Data Bus direction. If the power is interrupted, the PI line goes low (active), shutting off the gates. Likewise, if the address is in the key-protected range of the unit 0 memory and the key is not in the NVM WRITE ENABLE position, the MKY line goes low. Also, if the DBIN line is active, data is directed towards the CPU, and the write enable gates are disabled. If all input lines are high, the write enable lines are active (low).

The chip enable signals, E0 through E7, are formed after checking for interrupted power (PI), CPU reset (RS), and enable signals (C0 through C1) from the Bank Enable block. The power interrupt signal acts the same as for the write enable gates, shutting the gates off when power is interrupted. The CPU reset signal is for protection against accidental enabling during a CPU reset. Only the addressed bank is enabled by the bank enable lines.

Data Bus Buffers

These buffers isolate the Data Bus from the memories. The buffers are enabled by the NVM Board Select block. Data direction is selected by the DBIN signal from the CPU board. When DBIN is active, the CPU accepts data from the bus; and when DBIN is inactive, the CPU writes data onto the bus.

Two sets of buffers are used to limit the capacitive loading of the memories. One set handles data to and from the unit 0 memory, and the other set of buffers handles data to and from the unit 1 memory.

REAL-TIME CLOCK (Diagram 5C)

Circuits on this diagram and diagram 5D function as a Real-Time Clock. The clock keeps track of the date and time by counting from a reference frequency. The clock oscillator and counters continue operating when the power is interrupted. Therefore, the clock does not need to be reset when power returns.

The SETCLK command enters a reference string that consists of the date and time. When the command is entered, the value of a reference counter is read and stored in memory. When the clock is called by one of the clock commands, such as TIME or SCHEDULE, the clock reads the present value of the counter and compares it to the stored reference value. The difference between the two is proportional to the amount of time elapsed since storing the reference count. This difference is used to compute the current date and time.

Clock Source

This block provides for two clock reference sources. The internal source is a crystal-controlled oscillator. The external circuitry processes a 1 MHz, 75-ohm input signal. A detector circuit overrides the internal oscillator when an external signal is present, except when the instrument is in a power failure mode. With a power failure, the clock is always referenced to the internal source. This assures that the counter continues operating if the external source is also affected by the power failure. An automatic switching circuit selects between the external and internal references, and is used to set up test conditions.

The internal clock source consists of a 4 MHz crystal oscillator and a divider chain. Oscillator/divider circuit U171 divides the 4 MHz (0.25 microsecond period) signal 2048 times. The Clock Frequency adjustment, C168, is set by checking for a 512 millisecond period at TP177. A divide-by-two circuit, U271B, provides a 1024 millisecond period.

The external clock source receives 1 MHz at 0.3 to 4 volts peak-to-peak into 75 ohms. This can be from any source, though it is expected that it be from a frequency standard. A series of CMOS inverters process the signal. A peaking circuit around U380B, including adjustment C397, reduces unwanted frequencies while peaking the 1 MHz signal. Counter U370 divides the 1 MHz by 1024 (2 to the 10th power), providing a 1024 millisecond period.

An automatic source switching circuit detects the presence or absence of the external source. Inverter U380A feeds a detector consisting of CR373, CR375, and associated components. Diode CR373 clamps the negative half of the signal. Diode CR375 rectifies the positive half-cycle, and C371 stores the level. When an external input signal is present, the detector holds the A input of U270 high,

selecting the external source. When no external signal is present, or when the +Vy power supply is absent, the detector holds the A input to U270 low, selecting the internal source.

Analog switch U270 is used to select and direct the signal to the counters. The selected source signal is fed from the A channel output, pin 14, to a four times divider, U271A. That signal feeds another input to the switch, pin 1, the B1 input. In normal operating conditions this signal is connected to the B channel output, pin 15, and appears at TP018 with a period of 4096 milliseconds. In the Test mode, the jumper on P017 selects the B0 input, which is the 1024 millisecond period signal from the selected source. The C channel output provides the Latch Clock signal. Its sources are an 8192 millisecond period signal from the reference counter chain to input C1 for normal operating conditions, or the 1024 millisecond reference signal from the selected source when in the Test mode.

Counters

The circuits in this block provide twenty-nine lines of time-data. The lowest data bit, TD0, has a one-half second period; and the highest data bit, TD28, has a period of over four years.

The block consists of three CMOS twelve-stage ripple counters, U060, U040, and U030, and a four section two-to-one line multiplexer, U020. When the RT Test jumper on P017 is in the Normal position, the multiplexer connects the counters as a thirty-six-stage ripple counter. When P17 is set in the Test position, the counters may be reset and clocked as individual twelve-stage counters, with conditions set according to the positions of the Test Reset jumper on P009 and the Test Clock jumper on P008.

Real-Time Clock Power Supply

This block of circuitry provides two of the power supplies for the clock. The +Vx supply provides power to the clock oscillator and counter string. This supply includes a battery backup in case of power failure. The other supply is the +Vy supply. That supply provides power to the External Input processing string, counter, and detector. The +Vy supply does not stay active with a power failure.

The +Vy supply is derived from the +12 V instrument power supply. When the instrument power is ON, +5 V is developed across Zener diode VR289. This voltage forward biases CR289, providing the +Vy voltage. When instrument power is in STANDBY, OFF, or the power has failed, the +12 V supply goes low, reverse biases CR289, and the +Vy supply goes low.

The +Vx supply is present with power ON or in the STANDBY and power failure modes. With the instrument power ON, the +12 V supply biases Q170 off, isolating the battery and Power Fail lines from the +Vx line. The +12 V supply also charges the battery, BT190, through CR084 and R084. Zener diode VR289 switches on at +5 V, and forward biases CR285 to provide the +Vx supply.

With the instrument power in STANDBY, the +12 V supply is low, biasing Q170 on. The Power Fail line forward biases CR890, and supplies current to the +Vx line in this condition. The battery neither charges or discharges in this condition. Also, CR285 and CR084 reverse bias, isolating the +Vx line from the inactive +12 V supply.

With the instrument power OFF or with a power failure, the +12 V supply goes low, shutting off CR285 and CR084, and biasing Q170 on. The Power Fail line also goes low, reverse biasing CR890, and allowing current from BT190 to supply the +Vx line. The Power Fail line also pulls the cathode of CR996 low, issuing CPU interrupt I1.

This interrupt tests to see if the power failure is a momentary loss or more critical. The interrupt causes the CPU to idle for 5 seconds, then, if power is available, the instrument returns to normal operation.

The RT Clock Battery Switch, S081, allows disconnecting the battery from the circuit. This may be done to store the board for long periods of time, or to avoid damage to the components when shipping the board.

Comparator U180 monitors the battery voltage. If the voltage goes below +3 V, the comparator gives a low output. This lights the Battery Fail indicator, and flags the error to the instrument diagnostics. These indications can be caused by low battery voltage, battery failure, or the battery being switched off.

Status

The circuits in this block report the status of various signal lines via the CRU Bus to the CPU board, or through other error indicators.

Latches U340A and U340B monitor the Power Fail and Power Reset conditions, and provide Low Line, Power Fail, and Power Reset flags to the status flag multiplexer, U410. The Power Fail line goes low when the instrument power supply mains input goes low. The Power Reset line goes low when the power supply outputs are lower than normal.

When the Power Fail line goes low, the I1 interrupt to the CPU goes low. This initiates a 5-second idle state, after which, if power is restored (Power Fail high), operation returns to normal.

The CMOS buffers, U350, and latches U340A and U340B are powered by the battery backed-up +Vx supply. If a power failure occurs, the latches store the conditions of the Power Fail and Power Reset lines so that appropriate diagnostics messages can be generated when power is restored. The output of the Power Fail buffer is also fed as the Low Line signal to the status flag multiplexer. The outputs of the latches become the Power Fail and Power Reset signals to the status flag multiplexer. The latches are reset by the Reset line from the Auto Reset block, via CR313 shown on diagram 5c; or the latches can be reset by the CRU Bus as decoded at pin 7 of U200, shown on diagram 5C.

The Battery Fail circuit detects low battery voltage present at either of the batteries, and lights the Battery Fail indicators on this board and on the front panel. If either of the battery monitor circuits (U180 or U481) detect low battery voltage, U310B pulls the base of Q050 high, turning DS060 on. Also, U360A and U950 pull down on the front-panel BATTERY FAILURE line, lighting that indicator.

The status flag multiplexer, U410, places seven bits of diagnostic information on the CRU Bus at addresses 0440 through 044E (hex). The multiplexer reads address lines A0, A1, and A2 from the Address Bus, and receives its Strobe signal from the Status Enable line from the CRU Address Decoder shown on diagram 5D. The data inputs are from the various circuits on the NVM board.

The Strobe input is enabled when the address is in the correct range for status reporting and the Memory Enable line from the CPU is not active. As the three lowest significant bits of the address change, the data is placed on the CRUIN line as called by the CPU board.

Auto Reset

This circuit provides for an automatic timed reset if the CPU is idle for more than seventeen minutes. This is especially useful when the 1980 is stationed at a remote site. A temporary failure that might cause the 1980 to cease operation can be automatically reset. This allows restarting the 1980 Applications Program.

The Auto Reset function is only enabled when the front-panel keyswitch is OFF. Under normal operating conditions, the CPU periodically clears the timer. Under fault conditions, the Auto Reset circuit times out after seventeen minutes. This causes the instrument to Reset, and restarts the Applications Program.

The circuit is partially shown on diagram 5D and partially on diagram 5C. Two counters, U330A and U330B, divide the eight-second time data line (TD4) by 128, providing a 1024 second output period signal. This signal drives a monostable multivibrator, U401A, that produces a seventy-millisecond pulse every seventeen minutes. The

pulse is inverted by U501D when the front-panel key-switch, S102, is set to OFF. In this condition, the front-panel RESET push-button switch has no effect. When the key-switch is set to RESET ENABLE or NVM WRITE ENABLE, the gate is disabled, and the 1980 may be reset by the front-panel RESET switch.

The block is addressed by the CPU at CRU address 044A (hex) through decoder U300 shown on diagram 5D. When the Memory Enable signal is high and the Y3 address range is selected by the CRU Address Decoder (on diagram 5D), U300 decodes address lines A0, A1, and A2. When those address lines are all low, the Y0 output (pin 15) goes low, clearing U330A and U330B via U360C, all on diagram 5C. This occurs whenever the CPU is active.

REAL-TIME CLOCK DATA (Diagram 5D)

The circuits shown on diagram 5D decode CRU addresses, load and compare reference data, and clock data for the SCHEDULE commands, and write clock data onto the CRU Bus. Isolation from other clock circuits during power failure is also included.

CRU Address Decoder

This block decodes CRU addresses 0400 to 0480 (hex). The CRU Bus contains 4096 (4K) bits, addressed by twelve Address Bus lines A0 through A10 and A11CRU. Note that A11CRU is directly from the CPU, and is not the same as the A11 used for memory mapping.

Comparator U900 decodes the six most significant address bits, A6 through A11CRU, and issues the board select signal when the A9 bit is high and the other five bits are low.

Address lines A3 through A5 drive a three-to-eight line decoder, U320. The decoder is enabled for the address range selected only when memory is not enabled. The decoder generates five CRU enable signals (Y0 through Y3 and the Status Enable signal). The signals enable assorted decoders, latches, and multiplexers for their allotted CRU addresses.

Address lines A0 through A2 address the individual circuits that are enabled by decoder U320.

Scheduled Interrupt

This block interrupts the CPU operation when one of the SCHEDULE commands is used to schedule a task.

The CRUOUT line loads addressable latches U200, U210, and U220 with the lower eighteen bits of the time data for the next SCHEDULE task in the Operating System Scheduler queue. The latches are enabled by the CRUCLK signal as selected by CRU Address Decoder lines Y0, Y1, and Y2. The data for each latch output is selected by address lines A0 through A2. The CRU addresses are 0400 to 0430 (hex).

The latched data is compared with the lower eighteen bits of the clock time data by comparators U110, U100, and U101. When the latched time and the counter time match, the comparator outputs all go high. This sets U400, pin 6, high and U501C goes low, issuing interrupt I3 to the CPU. The CPU then reads all 28 bits of the current time, and compares against that stored by the SCHEDULE command. If it is not yet the scheduled time, the CPU reloads the comparators and resets the interrupt line. The comparator continues cycling until the scheduled time. When the CPU determines that the counter is at the scheduled point, the scheduled event takes place.

Other bits of CRU data latched in on U200 include a Latch Enable signal to enable the Clock Read Latches, Test Reset and Test Clock signals for the test conditions of the Counter, and a Reset line to the Status Latches, U340A and U340B. All latches are cleared with a CPU reset.

Clock-Read Multiplexer

The circuits in this block convert the parallel time data into serial data that is placed on the CRUIN line. Buffers feed data to a set of latches that hold the information while a set of multiplexers are converting it to serial information.

The time data bits from the counters feed a set of CMOS buffers, U120, U130, U140, U150, and U160. In the STANDBY mode or during a power interruption, these buffers shut off, isolating the counters from the following latch circuitry. This keeps power from being drained by the TTL latches.

The latches, U121, U131, U141, and U161, clock the time data in, and hold it until the data is converted into serial form and read into the CRUIN Bus. The Latch Enable comes over the CRUOUT Bus to strobe the latches.

The multiplexers, U230, U240, U250, and U260, place input data on the CRUIN Bus line as selected by the address and strobe inputs. This forms a serial string of all the input data for the CRU address range of 0400 to 043A (hex). The data consists of twenty-nine clock bits, and the Latch Clock, Interrupt, and External Clock Flag lines.

I/O RS-232C (A30)

This assembly interfaces between the 1980 CRU Bus and external equipment (peripherals) that conforms to the EIA RS-232C Data Communications standard. Provision for an Automatic Call Equipment (ACE) option conforming to EIA Standard RS-366 is also included. The ACE port allows automatic call origination by the Option 12 1980. Fig. 4-10 shows a block diagram of the board.

Port Connections

There are five communications ports. Three are Data Communications Equipment (DCE) ports (ports 0, 2, and 4), and two are Data Terminal Equipment (DTE) ports (ports 1 and 3).

The DCE ports simulate data communications equipment, and are intended for use with data terminal equipment, such as local terminals or other peripherals connected directly to the 1980. These are also referred to as local ports. The DTE peripherals connected to local ports might include data terminals (keyboard/display devices), plotters, printers, or a computer.

The DTE (remote) ports simulate data terminal equipment, and are used with modems (an acronym for modulator-demodulators) for data communications with distant terminals over telephone lines or other communications paths.

Ports 0, 1, and 2 have line drivers and receivers located on this circuit board, but have Asynchronous Communication Controllers (ACCs) located on the CPU board (A10). Ports 3 and 4 have all circuitry, including the ACCs, located on this board.

The ACCs, like UARTs (Universal Asynchronous Receiver Transmitters), interface between the CPU and the RS-232C equipment attached to the ports. Unlike UARTs, which usually convert between parallel data words and serial data in RS-232C format, the ACCs convert between serial data on the CRU Bus and serial data in RS-232C format. Because of the similarity, the two terms may be used interchangeably as they both refer to RS-232C converters. In 1980 manuals, if the terms UART or ACC are used, they refer to parallel-to-serial conversion unless otherwise noted.

The ACCs are standard RS-232C full duplex devices. They may be programmed to set the baud rate, stop bits, parity, and timer interval by writing to the CPU Control register. Transmission is initiated when an ACC either issues a Clear to Send (CTS) to a transmitting device, or receives a Clear to Send from a receiving device. It interrupts the CPU when service is required while either transmitting or receiving. An error at any time also generates an interrupt. After reading its Status register, the CPU determines the cause of the interrupt and takes appropriate action.

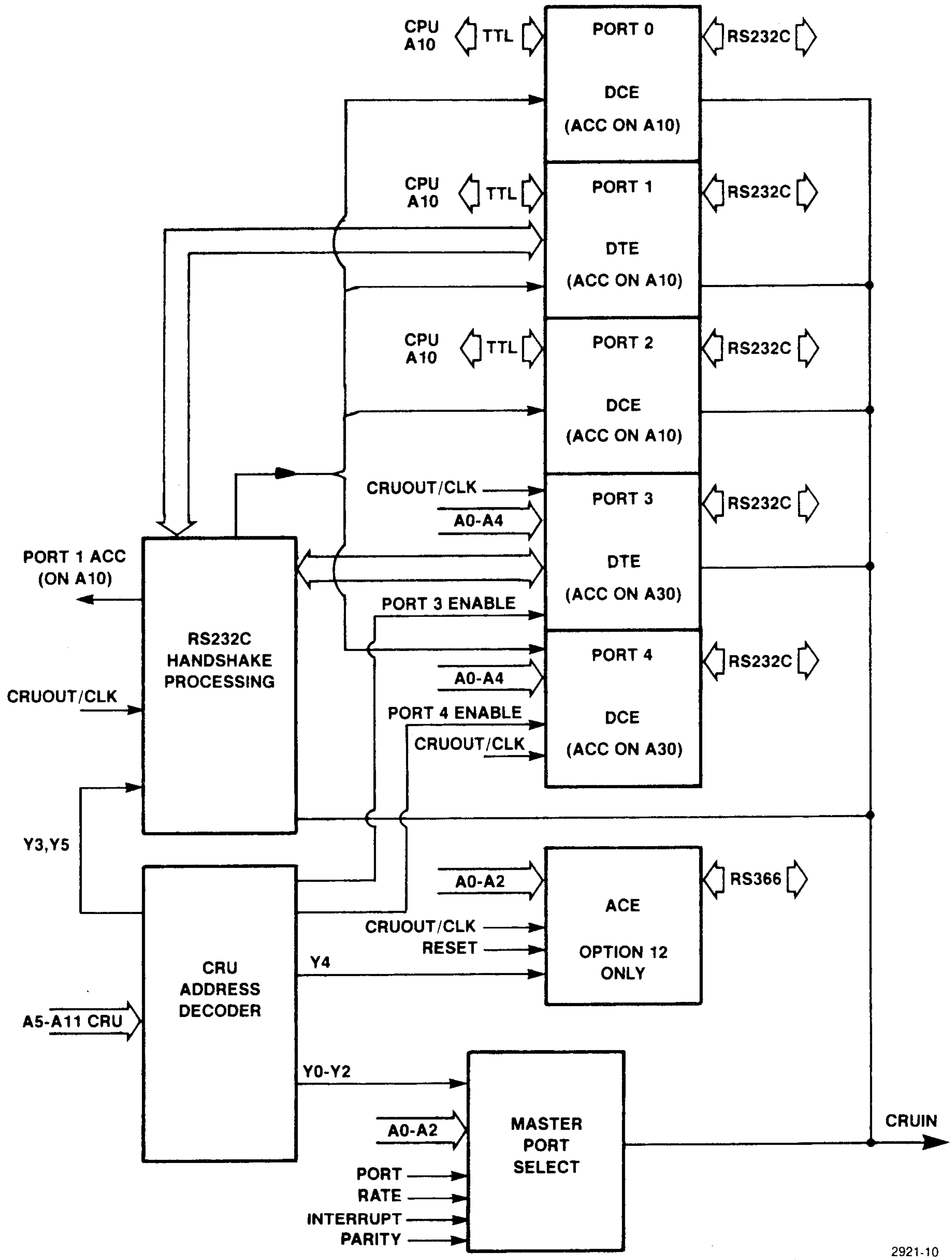


Fig. 4-10. I/O RS-232C (A30) Block Diagram.

Line drivers and receivers at the port connections convert to and from the +12 V logical "0" and the -12 V logical "1" required by the RS-232C standard.

Jumper pins are available on the DTR (Data Terminal Ready) signal input lines of all DCE ports and on the CTS (Clear To Send) signal lines of the DTE ports. These jumpers force the lines high to allow talking with two-wire devices.

Another jumper, P041, sets port 3 to the RS-232A standard. This allows using communication equipment conforming to that standard.

Address Decoding

This block decodes CRU addresses in the ranges allocated for the board. One range is allocated for the two ports with ACCs on the board (ports 3 and 4), and another range is allocated for the various CRU data encoders and decoders on the board. The CRUIN signal to the CPU is enabled whenever an address is in either of the ranges.

RS-232C Handshake Processing

This block monitors incoming RS-232C signals at the two DTE ports to see if the attached equipment is able to communicate. It also sends signals from each of the ports to indicate whether they are ready to communicate.

The circuit latches the Port 1 and Port 3 Data Set Ready (DSR), Received Line Signal Detector (RLSD), and Ring Indicator (RI) signals, and sends the information over the CRU Bus to the CPU. The circuit compares the signals with current CPU status, and it generates an ERFLG signal to stop communications if the port is not ready. The CPU acts on the information and resets the circuit. When the CPU and the attached equipment are ready to communicate, the ERFLG signal for the port goes low, indicating that the data set is ready. Jumpers are provided to force the ERFLG signal low for troubleshooting.

The circuit also receives other handshake information from the CPU, and sends it from the ports. This is information that is not generated by the ACCs.

Master Port Selection

This block allows setting CRU bits that define the default master port and its baud rate, parity, and the port 4 interrupt level.

One port is defined as the master port. This port has priority over the other ports when communicating with the 1980. When the 1980 powers up, system control is through the default master port. A

jumper on the board selects the port. Port 0 is factory set as the default master port. Any of the other ports can become the master port during operation of the 1980 by transferring control through keyboard or program commands.

Baud rate of the default master port is set by a jumper on the board. This is factory set to 300 baud, but may be changed from 75 to 9600 baud. During operation, baud rate is programmable for each port.

Port 4 is factory set for CPU interrupt level I6, but may be changed to I5 by setting the I5 Enable jumper. Parity is set by a jumper for even, odd, mark, or none. The 1980 is factory set for no parity.

The default port, baud rate, interrupt level, and parity settings are transferred to the CPU as input data on the CRU Bus.

Automatic Call Equipment (Option 12)

This circuit block includes the hardware necessary to incorporate the automatic call origination feature available with Option 12 of the 1980. The integrated circuits in this block are only present in Option 12 instruments.

When the ACE port is addressed, the ACE block originates or responds to the RS-366 signals. Signals into the 1980 are converted to serial form and placed on the CRU Bus for the CPU to process. Signals to the ACE port from the 1980 are decoded from the CRU Bus.

VIDEO DATA CONVERTER (A24)

The Video Data Converter assembly (A24) converts the video input signal from analog to digital form. Some analog signal processing is controlled by feedback from the Digital Feedback board (A22). Signal handling modes are also selected by control lines from the Digital Feedback board (A22).

The assembly consists of the Video Data Converter board (A24A1), the Analog-to-Digital Converter (ADC) board (A24A1A1), and three Filter boards (A24A1A2, A24A1A3, and A24A1A4). The assembly can receive two video signals and two sync signals, through the Main Interface board (A50), from the rear-panel input connectors. The Digital Feedback board (A22) supplies signals to control the Input Switches, Coupling, Clamp, Filters, Sync Selector, Offset, Programmable Gain Amplifier, and Dither circuits. The digital signal output is fed through the Memory Controller board (A20) to the Acquisition Memory board (A18).

Fig. 4-11 shows the block diagram of the assembly. The Video and Sync input signals feed the Input Amplifier. The Input Amplifier block selects, couples, clamps, and filters the video signal. Control signals from the Digital Feedback board (A20) control the selections of the various functions.

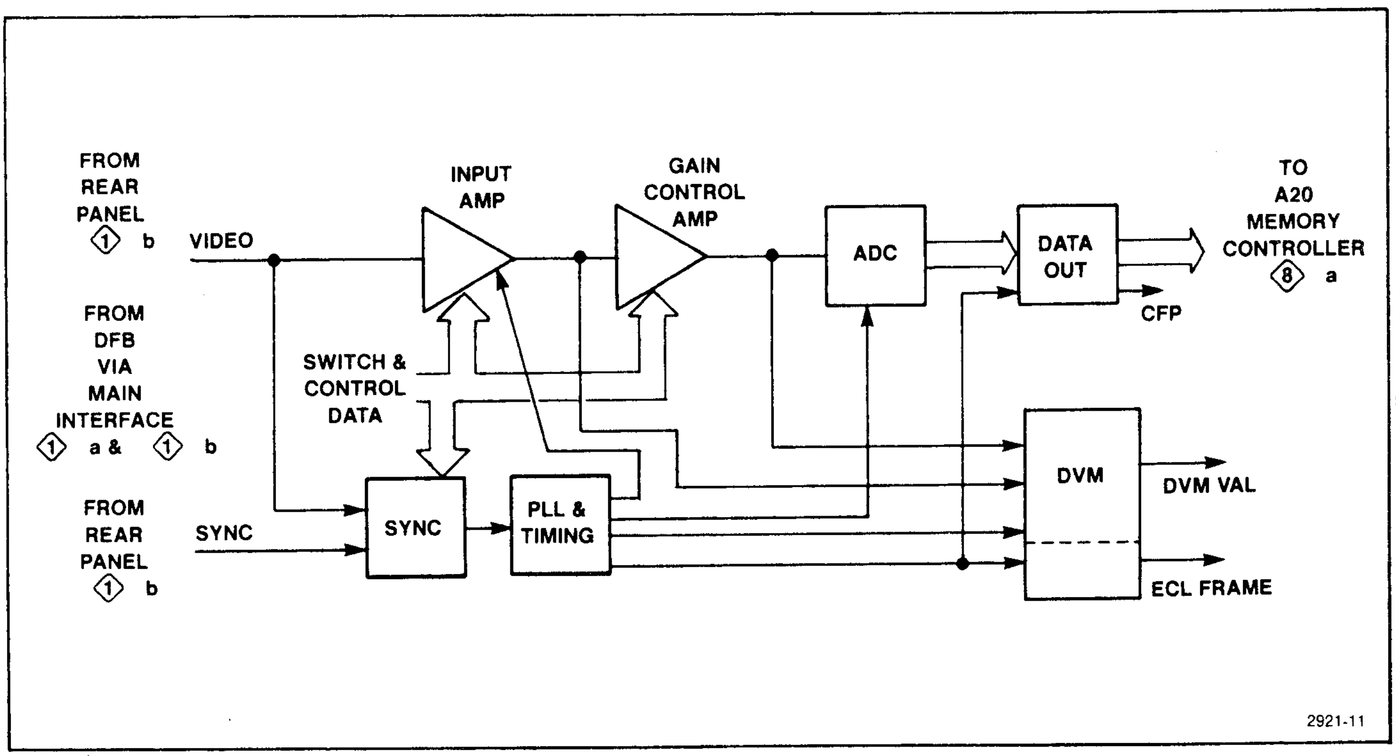


Fig. 4-11. VDC (A24) Block Diagram.

The Input Amplifier drives the Gain Control Amplifier The Gain Control Amplifier applies variable gain, offset, and dither to the video signal. The Digital Feedback board (A20) supplies the appropriate control signals.

The ADC (Analog-to-Digital Converter) converts the analog video signal into an eight-bit digital signal. The Data Output circuit buffers the data, and supplies it to the Memory Controller (A20).

The Sync circuits process the timing signal used as a reference for the Phase Lock Loop. The circuits select the Sync source from the Sync and Video input signals, and process the selected source signal. The Sync circuit are controlled by the Digital Feedback board (A22).

The PLL (Phase Lock Loop) and Timing circuits provide timing signals for the assembly. The PLL locks the timing signals to the incoming Sync signal. Timing signals include the Strobe to the ADC, the Clamp Pulse to the Input Amplifier, and both Frame pulses and Clock signals to the Digital Feedback (A22) and Memory Controller (A20) boards.

The DVM circuit forms a digital voltmeter. The circuit selects its input from several sources, and it produces the DVMVAL pulse. The time difference between the Frame Pulse and the DVMVAL pulse is proportional to the amplitude of the source. The Digital Feedback board (A22) converts the timing difference to a data word.

NOTE

> The detailed circuit description that follows covers several board versions that have different circuit numbers. For that reason, the descriptions include functional details within the blocks, but do not mention specific circuit numbers. Differences between versions are discussed where applicable.

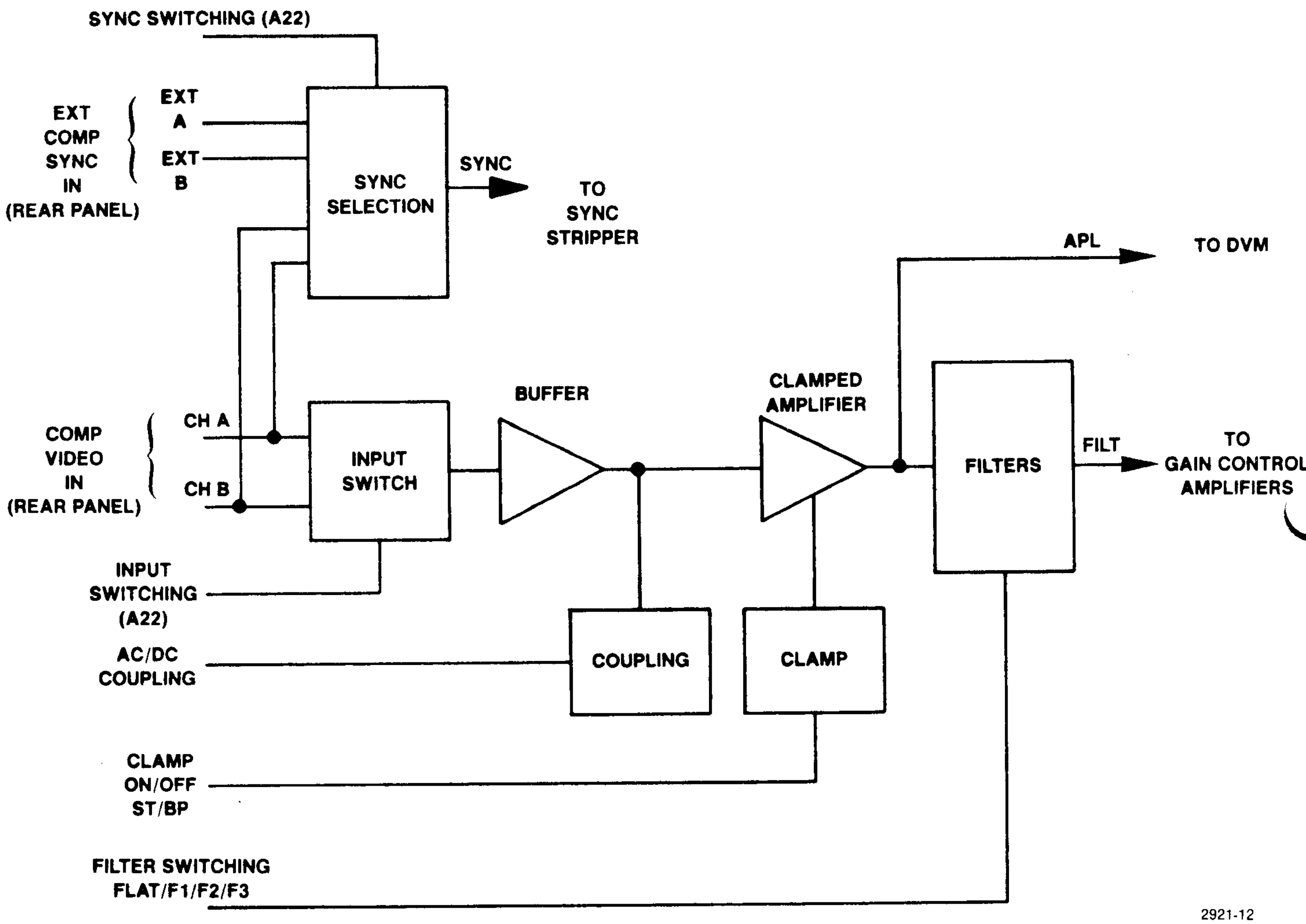


Fig. 4-12. Input Amplifier Blocks.

INPUT AMPLIFIERS 7A

The circuit blocks shown in Fig. 4-12 select, amplify, and process the input signal. The circuit functions in this portion of the assembly are similar to those that might be found in the vertical input sections of a television waveform monitor. The main differences are that in the 1980 the control is from computer circuitry rather than from front-panel switches, and that the analog signal is eventually converted to a digital signal, placed in computer memory, then processed, rather than displayed on a cathode ray tube.

The desired signal flows through the selected Input Switch, Buffer, Clamped Amplifier, and the selected Filter circuit. Other circuits include the Coupling, Clamp, and Sync Selector circuits.

Input Switch

This block of circuitry provides selection of either the Channel A or Channel B input signals. The switch for the selected channel acts as a unity gain buffer, and the switch for the other channel isolates the unwanted signal. The output of this block feeds the Buffer stage.

Control of these switches is by TEK ANSWER BASIC commands. The Digital Feedback Assembly (A22) transfers these commands via the Main Interface (A50) to this assembly.

Buffer

This stage provides isolation between the Input Switches and the following stages. The Buffer has a gain of one. The Coupling circuit acts on the output of the Buffer. From this block, the signal drives the Clamped Amplifier.

Coupling

This block provides either ac or dc coupling of the signal at the Buffer output. This is done by switching a simulated inductor across the signal for ac coupling.

The control lines for this block come from the Digital Feedback (A22) via the Main Interface (A50). The switch control is provided by the appropriate TEK ANSWER BASIC commands.

Clamped Amplifier

This stage follows the Buffer, and has about 0.85 times gain. The Clamp circuit acts on this amplifier to restore the sync tip or back porch levels of the signal.

The output of this circuit feeds the Filter circuits that follow and the DVM circuit shown on diagram 7E.

Clamp (DC Restorer)

The Clamp circuit restores either the sync tip or back porch of the signal to internally-assigned dc levels. These levels are such that if the sync is -286 mV, the dc level of the signal will stay the same when shifting between Back Porch and Sync Tip Clamps. This keeps the signal within the dynamic range of the a-d converter (depending upon the gain of the Programmable Gain circuit). The Clamp speed can be set for Fast or Slow, or the Clamp can be switched to Off.

TEK ANSWER BASIC commands control this circuit from the Digital Feedback (A22) via the Main Interface (A50).

This block also provides the DD-not signal used on diagram 7E. This signal is not related to the Clamp circuitry other than being generated by a device in this block.

Filters

This block passes the signal from the preceding Clamped Amplifier to the Summing Amplifier shown on diagram 7B. The circuits in this block allow the signal to be passed through a 1% attenuator, or to be routed through one of three possible filter circuits. The 1% loss allows room for insertion loss in any filters.

Two loaded filter boards and one unloaded board (subassemblies A24A1A2, A24A1A3, and A24A1A4) are included in assembly versions 672-0777-01 and up. These filters may or may not be used, depending upon the applications program.

The IRE Filter board (A24A1A2) is a Pi low-pass filter that causes the 1980 to have a frequency response with roll off corresponding to IRE standard 23S-1, 1958. The attenuation at 3.6 MHz is about 20 dB, and at 4.43 MHz is 22 dB or more.

The PAL L.F. Error Filter board (A24A1A4) provides a weighting filter used by the PAL (Option 2) Applications program for measuring back porch disturbances due to mains frequency hum. The board causes the 1980 to have a broad bandpass that is 8 dB up at 200 Hz, and 0 dB at 50 and 600 Hz. The circuit consists of two active filters. The first stage acts as a high pass filter driving a low pass filter.

This gives the broad bandwidth with peaking where required. The second stage rolls off the high frequencies slightly, and sets gain of the board.

The unloaded Filter board (A24A1A3) may be used to build special purpose filters needed by a user's application program. The board contains a terminating resistor for the circuits it drives.

NOTE

> In assembly version 672-0777-00, the assembled filter boards are not included. Unloaded Filter boards are included for users to build their own filters. Filters should be designed with input and output impedances between 200 and 500 ohms.

This block contains four switching circuits. Each circuit has an input switch and an output switch. This resembles a double-pole, four-position switch, with an attenuator and the three filter boards filling the positions.

Control is by TEK ANSWER BASIC commands to the Digital Feedback (A22) where the switch control lines originate. They are fed to this assembly via the Main Interface (A50).

Sync Selector

This block selects the sync source to drive the Sync Stripper block shown on diagram 7D. The circuit selects from two external Sync inputs and from the two video inputs. Control is from the Digital Feedback (A22) via the Main Interface (A50), and is accomplished using TEK ANSWER BASIC commands.

The selected sync source is the timing reference for the clamp circuits. If the signal being clamped is offset in time from the sync source signal, problems can occur.

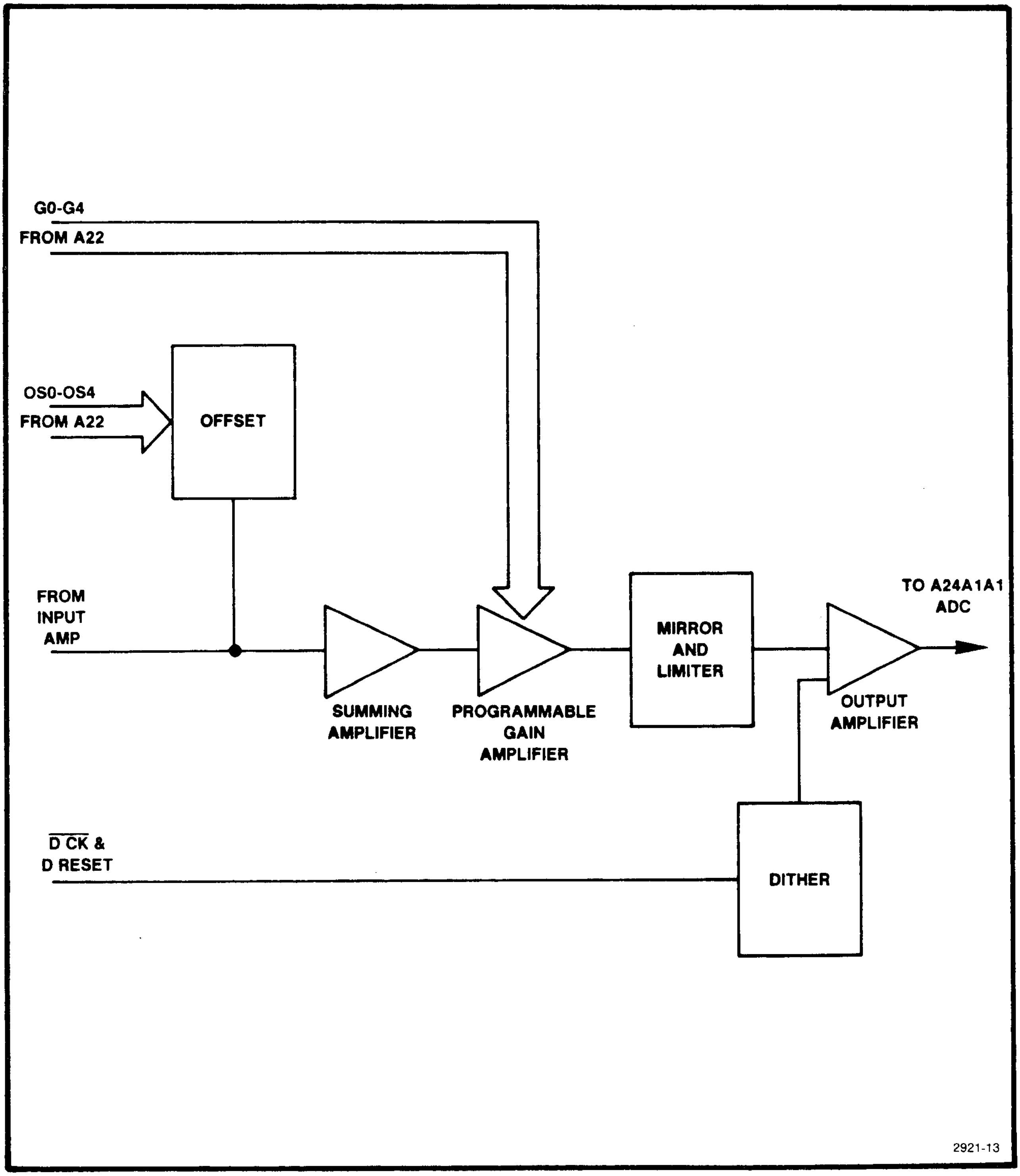


Fig. 4-13. Gain Control Amplifier Blocks.

GAIN CONTROL AMPLIFIERS 7B

The circuits depicted by the blocks in Fig. 4-13 amplify and control the signal from the Filters block. Power Supplies for the assembly are also included. The signal flows through the Summing Amplifier, Programmable Gain Amplifier, Mirror and Limiter, and the Output Amplifier circuits. The Offset and Dither circuits provide offsets to the Summing Amplifier and Output Amplifier, in that order, to help increase the resolution and accuracy of the measurements. From the Output Amplifier, the signal goes to the ADC subassembly (A24A1A1).

Summing Amplifier

This stage passes the signal from the Filter Switch, and provides a little more than unity gain. A signal from the Offset circuit is summed into the input of this amplifier. That signal is used to offset the incoming signal when required. The output of the amplifier goes to the Programmable Gain Amplifier.

Offset

When required, this circuit provides a signal to offset all or portions of the incoming signal. This can be thought of as a high-speed, vertical position control. The offset signal is produced by converting a five-bit digital word into an equivalent analog signal. This digital-to-analog converter (dac) stage is fed by the Digital Feedback assembly (A22) via the Main Interface (A50). The analog Offset signal meets the incoming signal at the input of the Summing Amplifier.

An example of use of the Offset circuit is when chrominance measurements are made on the linearity test signal. The luminance portion of the signal can be cancelled by feeding an inverted representation from the Offset circuit. This allows the chrominance portion to be amplified by the Programmable Gain circuit, thus using the ADC's full dynamic-range window.

Programmable Gain Amplifier

This amplifier controls the gain of the signal so that the maximum resolution and accuracy can be achieved. This is done by increasing the amplitude of the signal to fill the dynamic range window of the ADC subassembly (A24A1A1).

The analog signal from the Summing Amplifier is converted from single-ended to differential. A monolithic transistor pair provides this conversion. The input signal drives the left-hand transistor base, and the output signals are taken from the collectors. Negative

feedback is taken from the next stage to drive the right-hand transistor base.

The succeeding stage consists of a pair of five-bit dacs that are connected as a differential stepped-gain amplifier. The differential signals drive the bias inputs to the dacs. The dacs share an emitter resistor at their V(eel) connections. The dac output currents are proportional to the digital input value (N) multiplied by the reference signal current of the upper dac (Iref1).

The reference current output provides negative feedback to supply the current to the right-hand transistor base necessary to force it to track the input signal. The reference current tracks the input voltage and is generated through a 480-ohm resistor. The reference current signal forces the I(out) of each dac to track the input voltage.

The digital input is from the Digital Feedback assembly (A22) via the Main Interface (A50), and is in the form of a five-bit digital word. This allows 32 levels of gain. The gain is then programmed as needed by the Applications program.

The output signal current (in mA) for the upper converter (Iout) is determined using the formula:

$$+Iout = (N/8)(Vin/0.48)$$

The output current for the lower converter is the inverse of the upper.

The Programmable Gain Amplifier outputs provide differential current drive to the Mirror and Limiter stage.

Mirror and Limiter

This circuit accepts the differential signal from the Programmable Gain Amplifier and re-converts it to a single-ended signal. Positive and negative voltage peaks are also limited by circuits in this block. The circuit mirrors current from the upper dac in the previous circuit, and sums it with current from the lower dac. This creates single-ended drive to the Output Amplifier.

Output Amplifier

This is the final amplifier stage before the A-D Converter subassembly (A24A1A1). The input to the stage is from the Mirror and Limiter circuit. This stage provides a 75 ohm output impedance. The Dither circuit provides an offset to this amplifier.

Dither

This circuit provides an offset summed with the input to the Output Amplifier. Dithering allows increased effective resolution and accuracy. This is accomplished by shifting the level of the signal each time a sample is taken so that the signal is sampled at different levels each time.

Power Supplies

The circuits in this block provide power to the other circuits in the assembly. Voltages supplied are: +15 V, +12 V, +5 V, +5 V (digital), +1.5 V, -1.5 V, -5.2 V (digital), and -12 V.

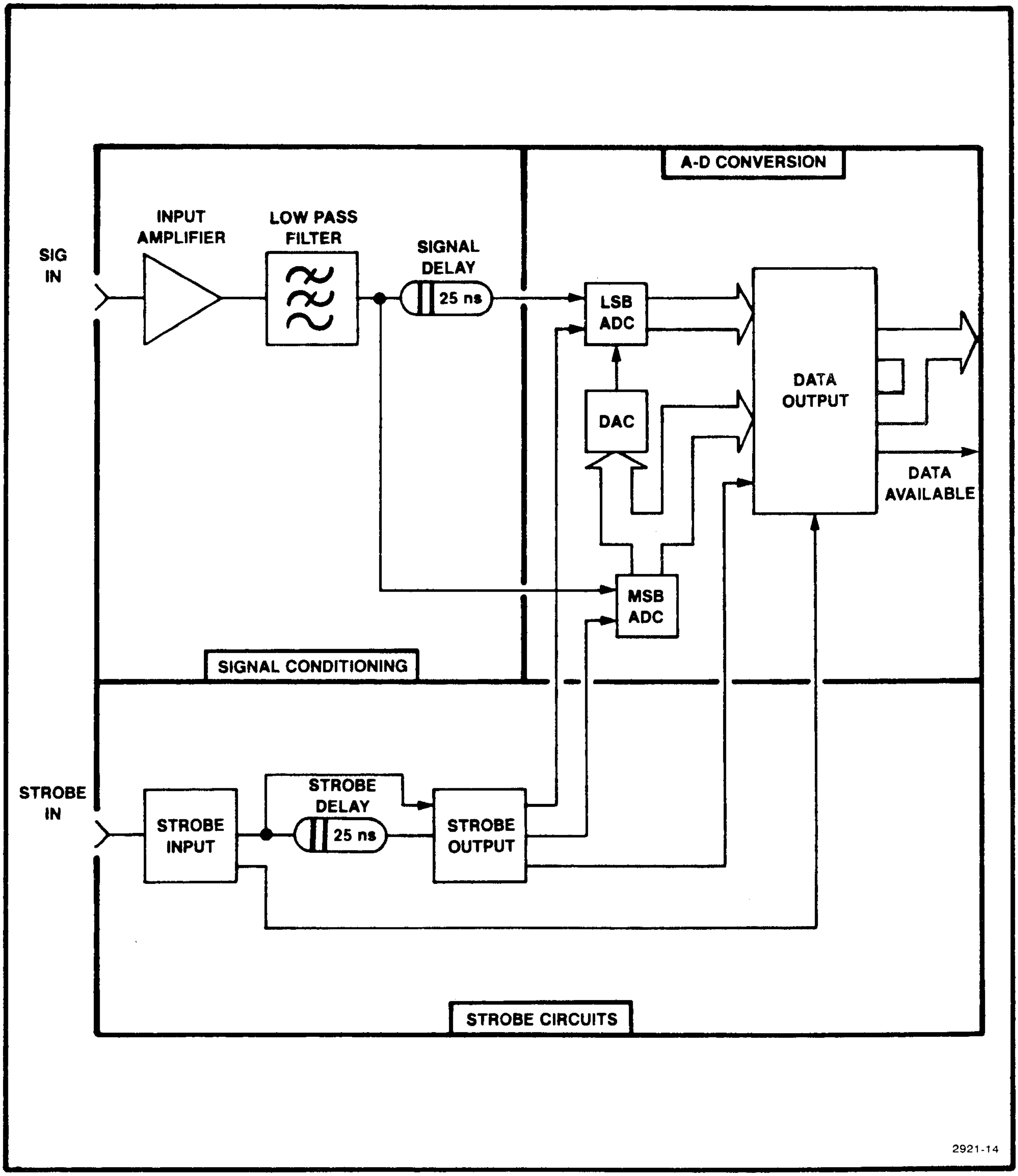


Fig. 4-14. A-D Converter Blocks.

A-D CONVERTER SUBASSEMBLY (A24A1A1) 7C

This subassembly takes the analog signal that comes from the Gain Control stages and converts it into an equivalent digital signal. The output signal is an eight-bit wide digital word. Physically, the subassembly is a circuit board that mounts on the Video Data Converter subassembly (A24A1).

The block diagram for this board (shown in Fig. 4-14) groups the circuits into three basic blocks. More detailed blocks are included within these larger blocks. The Signal Conditioning circuits amplify, filter, and delay the incoming analog signal. This prepares the signal for digital conversion. The A-D Conversion circuits make up the Analog-to-Digital Converter (ADC) that performs the actual conversion of the signal. The Strobe circuits set up the timing for the A-D Conversion stages. This allows a usable output signal at the fast conversion rate used here.

Signal Conditioning

This group of circuits provide some final conditioning of the signal before it is converted.

Input Amplifier. This block amplifies the signal from the Gain Control stage. The signal sees a 75-ohm input impedance looking into the amplifier. Gain is set for a little more than 2.5 times as measured at the input of the Low Pass Filter. The signal output drives the Low Pass Filter.

Low Pass Filter. This block prevents aliasing by the ADC. Aliasing is an effect of sampling a signal. Frequency components higher than one-half the sampling rate appear as lower frequencies when sampled. The higher frequencies assume the identity of the lower frequency as an "alias." The Low Pass Filter has a flat frequency response and an equalized phase response over the desired signal frequency range, and attenuates anything at frequencies that might be affected by aliasing. This assures that the ADC samples only the desired signal.

The output of the Low Pass Filter feeds the MSB (most significant bit) ADC and the Signal Delay block.

Signal Delay. This block provides a 25 nanosecond delay before the signal drives the LSB (least significant bit) ADC. The output of the MSB ADC is reconverted by the DAC to also drive the LSB ADC. The delay compensates for the conversion time required by the other two convertersso that the two analog signals arrive at the LSB ADC at the same time.

Analog-to-Digital Conversion

This group of circuits perform the input signal analog-to-digital conversion. The Reference Supplies provide stable reference levels for the converters. The MSB ADC, LSB ADC, and DAC (Digital-to-Analog Converter) circuits form an eight-bit, cascade-comparator-type adc. The Data Output block provides the digital output signal to the ADC Data Output block shown on diagram 7E.

Reference Supplies. The circuits in this block serve the adcs and DAC as reference and bias sources.

MSB ADC. The signal from the Low Pass Filter drives this block. This adc produces the four most significant bits of data. That data is fed to the Data Output block, and to the DAC block. The MSB ADC receives a strobe from the Strobe Output block.

DAC. This circuit reconverts the MSB data into an analog signal that feeds the LSB ADC.

LSB ADC. This block produces the four least significant bits of data. The LSB ADC essentially has two inputs. The reconverted MSB signal feeds the normal input, and the signal from the Signal Delay block feeds a reference voltage input. The adc converts the difference between the two input signals. This means that the range of signal that this adc converts is 1/16 that of the MSB ADC. The Strobe Output circuit provides a delayed strobe to this block. The output data from the adc goes to the Data Output block.

Data Output. This block provides the data and strobe outputs for the board. The outputs are properly timed, and levels are correct for driving the emitter-coupled logic-integrated (ECL) circuits on the Video Data Converter (A24A1).

Strobe Circuits

The strobe circuits provide timing pulses. These strobe pulses trigger the adcs and the Data Output. This is to make sure that the time delay between the two converters is compensated for. The signal is then sampled at the same point, with respect to the clock, by both adcs.

Strobe Input. This circuit receives the ECL level strobe input from the Video Data Converter (A24A1). Strobe pulses feed the Strobe Delay block, Strobe Output block, and provides the strobe signal for the latches in the Data Output block.

Strobe Delay. This block provides a 25 nS delay to match the delays of the Signal Delay Line and the combined conversion times of the MSB Converter and the DAC.

The delay line output feeds the Strobe Output block. A direct connection between the delay line input and the Strobe Output block is used to provide the undelayed strobe.

Strobe Output. This block provides strobe pulses at proper times and in ECL format to the MSB Converter, the LSB Converter, and the Data Output blocks.

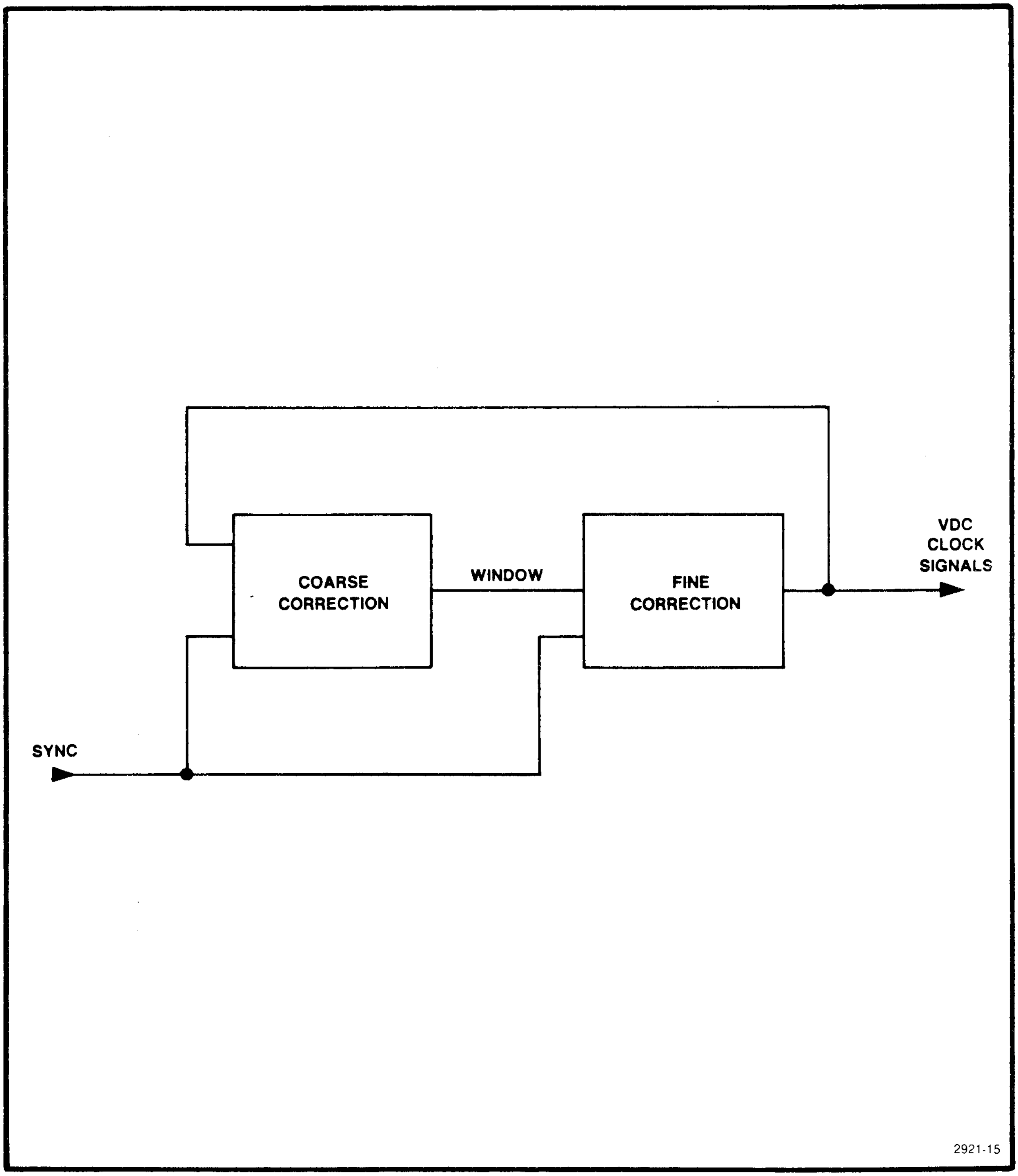


Fig. 4-15. Basic Phase Lock Loop Blocks.

PHASE LOCK LOOP (Part of 7D and 7E)

The Phase Lock Loop circuitry locks the internal timing of the data acquisition circuits to the timing of the incoming signal. The Sync signal is recovered from the incoming signal, and serves as the timing reference. The internal timing is fed back as the Window signal. The phase relationship of the two signals is compared. Correction circuitry moves the position of the Window with respect to Sync until the leading edge of Sync lies exactly in the center of the Window.

The phase lock loop consists of two groups of circuits. They are the Coarse and Fine Correction circuits. A simplified block diagram is shown in Fig. 4-15.

The Coarse Correction circuits generate the Window timing, provide noise protection, and perform a coarse adjustment to bring the Window and Sync in phase. When the leading edge of Sync occurs outside the Window, the Coarse Correction circuits first wait to see that the next Sync pulse is also out of the Window. This makes sure that the loop is not unlocked by a random noise spike. If the Sync pulse is valid, the circuit steps the Window pulse in the appropriate direction until the leading edge of Sync lies within the Window.

When the Window is encompassing the leading edge of Sync, the Window signal is enabled to the Fine Correction circuits. This completes the feedback loop. The Fine Correction circuits move the Window to exactly center around the leading edge of Sync. As mentioned previously, if only one noise spike occurs, the phase lock will ignore it. In this case, the Fine Correction circuits are not enabled, so no change in timing occurs.

Fig. 4-16 shows the Phase Lock Loop circuitry in more detailed blocks. Refer to these blocks for the following phase lock descriptions.

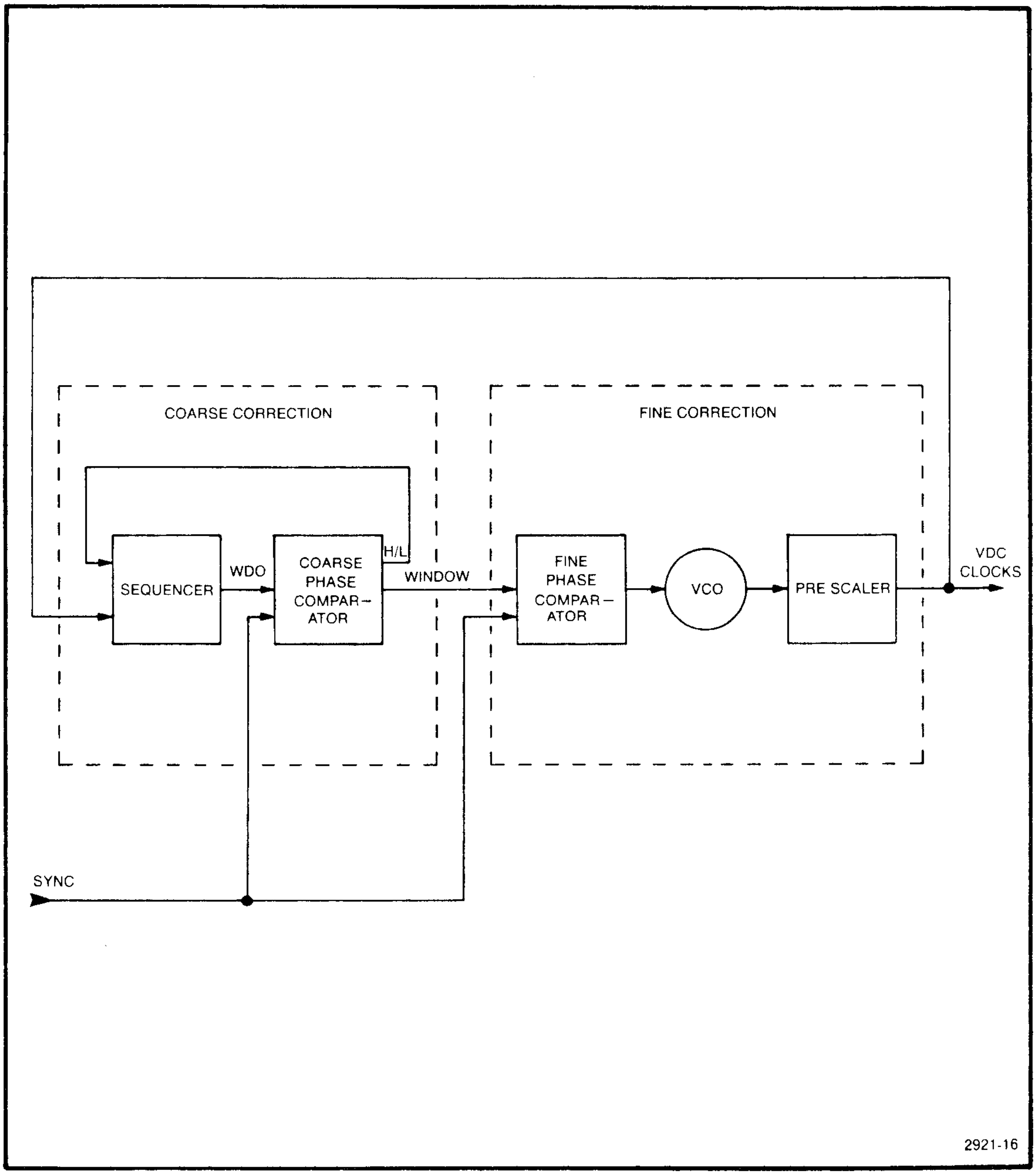


Fig. 4-16. Detailed Phase Lock Loop Blocks.

COARSE CORRECTION CIRCUITS 7D

The circuits that perform the coarse correction are the Sequencer and the Coarse Phase Comparator.

The Sequencer generates timing signals for the Coarse Phase Comparator, Frame Pulse Generator, and Clamp Pulse Generator circuits. The clock output of the Prescaler in the Fine Correction circuits drives the Sequencer, and feedback lines from the Coarse Phase Comparator control the phase relationship between the Sequencer output and the incoming sync.

The Coarse Phase Comparator compares the phase of an output of the Sequencer with the phase of the Sync signal, thus comparing internal and external timing. If the phase relationship of the two signals is out of the range of the Fine Correction circuits, the Coarse Phase Comparator feeds back to the Sequencer that the phase is either high or low. This causes the Sequencer to step its output in the appropriate direction until the phase relationship is within the desired range. At that point, the Window signal is enabled.

Sequencer. This stage generates the timing signals for the Coarse Phase Comparator, the Clamp Pulse, and the Frame Pulse Generator circuits. The timing signals include line-center timing for three television systems (NTSC, PAL, and PAL-M), signals used to generate the Window signal, the Clamp Pulse gate, and Clamp Pulse timing for the three systems. The circuits that generate these signals include a counter, read-only-memories (ROMs), a data selector, and assorted flip-flops.

The counter, the data selector, two of the ROMs, and two of the flip-flops form a variable rate counter and divider. The division rate depends on the television system selected and on the phase relationship of the external and internal timing.

The eight-bit up/down counter addresses the ROMs. The phase-one clock signal from the Pre-Scaler, shown on diagram 7E, clocks the counter. When phase-locked, the clock signal is locked to the incoming Sync; and when not phase-locked, the clock is the free-running frequency determined by the VCO for the particular television system. The counter counts up during the first half of the television line, then the Up/Down signal switches, causing the counter to count down during the last half of the line.

Each ROM output line acts as a timing signal line, with the last half of the signal during the count cycle being a mirror image of the first half. This is because, as the counter increments up and then back down, the data in the addressed ROM locations is clocked out twice. The lower ROM shown on the schematic generates the Phase Lock Windows signal, and also the Sync Tip and Back Porch Clamp Pulse timing for the three television systems. The Clamp Gate, V Window, and 4-Phase signals are generated by the middle ROM. Three other

outputs of the middle ROM and three outputs of the upper ROM, along with the data selector, generate the line-center timing for the three television systems.

The five most significant counter bits address the middle ROM, and the three least significant bits and the H and L lines address the upper ROM. The upper ROM then generates its signals more often (and includes more detail) than the lower ROM. The H and L lines cause different sections of the upper ROM to be clocked out, depending upon the phase relationship of the internal and external timing. This changes the divider ratio of the counter.

The M and P lines from the Digital Feedback board (A22) feed the data selector to select the television system as follows:

M low, P low selects NTSC

M high, P low selects PAL-M

M low, P high selects PAL

M high, P high selects no input

The no-input mode of the data selector opens the counter up/down feedback loop. This is helplful for diagnostics or troubleshooting.

The two halves of the data selector function as an AND gate. The selected signal from middle ROM enables the upper half of the data selector. This gates the selected detailed timing signal for the system (from the upper ROM). The resulting signal provides line-center timing for the selected television system.

The divider ratios take into account the subcarrier and horizontal line rates of the systems as they relate to the the phase lock VCO frequencies. The following discussion uses the NTSC system for an example.

For NTSC, the subcarrier frequency f(SC) is related to the horizontal line rate, f(l), by the formula:

$$f(SC) = [910f(l)]/4$$

The VCO frequency is 2*910f(l). The Prescaler divides by five for NTSC, therefore, the phase-one clock period for NTSC is 2*182f(l). Since the counter only counts to the middle of the line, the divider ratio for NTSC when phase locked is 182.

For one NTSC line, the counter counts up for 182 counts, then the Up/Down signal switches, causing the counter to count down 182 counts to zero. When the counter reaches zero, the Carry output goes low and resets the Up/Down flip-flop. Then the counter begins counting up, starting the cycle over.

Divider ratios for the other systems are 227 for PAL and 101 for PAL-M. The Prescaler divides by five for PAL and nine for PAL-M.

When the signals are not coarse phase locked, the divider ratio changes to help bring the timing in phase. If the Coarse Phase Comparator detects that the Sync signal is out of the range of the Fine Correction circuits, it issues either a High or a Low signal. This calls data from other sections of memory in the upper ROM, changing the division ratio of the counter. The data output from those sections of the ROM causes the Line-Center signals to step in the appropriate direction to bring the timing within range of the Fine Correction circuits. If the H line is asserted, the count increases by one from the normal count, reducing the frequency of the Sequencer outputs. If the L line is asserted, the count decreases one count, increasing the frequency. For a complete up and down counter cycle, the count will be changed by two if either the H or L lines are asserted.

When the counter and the incoming sync are in phase, the Fine Correction circuits adjust the clock driving the counter. This fine adjusts the Window signal around the incoming Sync signal, and completes the phase-lock of the internal and external timing.

The line center timing is clocked, by the Prescaler phase-one clock, through a J-K (not) flip-flop wired as a latch. The latch provides the negative-going Line Center pulse that has a rising edge approximately coincident with the center of the television line. The Line Center pulse feeds the Coarse Phase Comparator and Frame Pulse Generator circuits.

The Up/Down and Down/Up signals control the counter direction and tell the Coarse Phase Comparator whether the phase-lock window is up to half a line ahead of or behind the incoming sync. These signals are square waves that switch at the center of the line and at the start of the line. The opposite output of the Line-Center latch feeds the J input of the Up/Down flip-flop. The K input is driven by the Carry output of the counter, marking the start of the line. This flip-flop is clocked by the phase-two Prescaler Clock.

As previously stated, at the beginning of the line the counter starts counting up. When it reaches what should be the center of the line, the Up/Down input switches and causes the counter to count down. Then, when the count reaches zero at the end of the line, the carry output switches the Up/Down flip-flop and the count starts up again.

The Line-Start Clock signals are one-clock-cycle pulses that mark the start of the television line. The signals feed the Coarse Phase Comparator and Frame Pulse Generator. The carry output pulse from the counter feeds the Data input of a D-type flip-flop that is clocked by the phase-two Prescaler Clock.

Coarse Phase Comparator. This circuit checks to see if the leading edge of the Sync signal occurs before, during, or after the phase lock timing window. If the Sync and window timing coincide, the circuit sends the Window signal to the Fine Phase Comparator block. If they don't coincide, the circuit generates the High or Low correction signals to change the Sequencer counter divider rate in the appropriate direction. Thus, the Line Center and counter direction control signal timing also moves in the proper direction.

The circuits in this block include a Sync strobe, some gates to form signals, and two sets of flip-flops used as latches and comparators. The Sync strobe signal clocks three signals through a multi-section latch. The three signals represent the phase relationship of the internal and external timing. The Line Center signal latches those signals in the second set of flip-flops. The resulting signals provide the Fine Phase Correction Window signal, or the H or L counter control signals.

A pair of D-type flip-flops form a strobe circuit that clocks the leading edge of sync through to a four-section, common-clocked D flip-flop used as a comparator. The Line Center strobe goes negative just before the center of the line to clear the flip-flop. This inhibits the circuit from clocking on equalizer pulses.

A NAND gate combines two Sequencer ROM signals (Phase Lock Windows and 4-Phase) to produce the coarse Window signal (WDO) used as the internal timing source. The WDO signal timing corresponds to that of the Window signal enabled to the Fine Correction circuits.

The WDO signal and the outputs of a pair of gates drive three sections of the four-section, common-clocked flip-flop. One of the gates is driven by the D/U line, and the other by the U/D line. Both gates are inhibited by the WDO signal and the Line Center signal. The WDO signal disables the up/down controls during the phase lock window time so that the Fine Correction circuits are not accidentally disturbed by the up/down switching.

The WDO signal and the gate outputs are latched by a strobe at the leading edge of sync. The latched levels (representing the levels at the sync edge time) are fed through another set of latches. These are clocked by the Line Center signal. This second set of latches prevents the Window from being enabled by a single noise spike. Two successive sync cycles are required before the second set of latches are clocked.

Fine Correction Circuits

This group of circuits provide analog control of the VDC clock output. The circuits consist of the Fine Phase Comparator, VCO (Voltage Controlled Oscillator), and Prescaler blocks.

The Fine Phase Comparator examines the phase relationship of the Sync and Window signals. This circuit drives the VCO with a level corresponding to that phase relationship.

The VCO is the clock source for the Phase Lock Loop circuits. When phase locked, the frequency is an exact multiple of the line frequency of the selected system. Those multiples are:

NTSC = 910*2f(l)

PAL = 1135*2f(l)

PAL-M = 909*2f(l)

The first number in the equations refers to the number of samples per line (e.g. - 910 samples are taken in NTSC measurements).

The Prescaler provides the PLL clock signals. The clock signals are divided down from the VCO signal either five times for the PAL and NTSC systems or nine times for the PAL-M system. This provides clock signals at the following rates:

NTSC = [910*2f(l)]/5 = 364*15.734 kHz = 5.727 MHz

PAL = [1135*2f(l)]/5 = 454*15.625 kHz = 7.094 MHz

PAL-M = [909*2f(l)]/9 = 202*15.734 kHz = 3.178 MHz

There are two clock outputs, phase-one and phase-two, that are delayed from each other.

The Prescaler also produces the ECL Clock signal for the Digital Feedback assembly (A22) and the Strobe signal for the ADC subassembly (A24A1A1).

Fine Phase Comparator. This circuit generates the VCO control voltage by comparing the relationship of the incoming Sync signal with the internally-generated Window signal. The circuits used include an ECL, dual D-type flip-flop, a switched current mirror, and an rc filter.

The phase-one PLL Clock signal clocks the Window signal through the A section of the dual flip-flop. The B section of the dual flip-flop clocks the first portion of the Window signal through, and then the leading edge of the Sync signal at the Set input causes the output to switch. So, the A section provides a re-clocked Window signal, and the B section provides a signal at the B-not output that is high during the first part of the Window and low after the leading edge of Sync.

If the window is not enabled by the previous stages, the flip-flops have no output. The error control voltage and, therefore, the clock frequency remain the same until Sync is sampled by the Window signal again. This protects against noise spikes on the Sync line that might disturb phase lock.

The current mirror consists of a dual transistor and three transistors from a monolithic array. The three array transistors include two wired as a differential pair and the third to switch current to and from the emitter circuit of the differential pair. The dual transistor circuit acts as a current mirror.

The current mirror acts as a bi-directional current source. The emitter resistors of the dual transistor set equal gain for each polarity. The differential pair controls the polarity of current flow.

The re-clocked Window signal switches the emitter circuit array transistor off, thus enabling current to flow through one or the other transistor in the differential pair. The base of the right side transistor in the pair is biased half-way between ECL high and low levels. Switching the left-hand transistor changes current polarity in the current mirror.

Therefore, from the start of the re-clocked Window signal until the start of the Sync signal, the left side of the differential pair is on; and from the start of Sync until the end of the Window, the right side is enabled.

The rc filter circuit develops the VCO error voltage and averages out time jitter caused by noise on the leading edge of the Sync signal. As current flows in the current mirror, a voltage ramp develops on the filter capacitors. When the current mirror changes polarity, the ramp direction changes. If the leading edge of Sync is exactly in the center of the Window signal, the current will be the same in both directions, and therefore, the average current will be zero. The filter sets an effective phase lock loop time constant of about 100 television lines to average out any Sync jitter.

There is also a circuit in this block that produces a reset signal that synchronizes the Strobe and ECL Clock signals generated in the Prescaler block with the Window signal. (The Window signal is also synchronous with the Frame Pulse, which is the timing reference for the digital part of the acquisition circuitry. The Strobe and ECL Clock signals provide the clock signals to those circuits.) This prevents a timing skew when phase locking.

A NOR gate and an rc integrator recover an edge from the re-clocked Window signal. The integrator delays the Window signal into one input of the NOR gate, while the other input is not delayed. This produces a pulse at the output representing the amount of delay. This is fed to the divide-by-two flip-flop in the Prescaler.

VCO. This circuit is the clock source for the Phase Lock Loop circuits. The block consists of two voltage-controlled oscillators, a switching circuit, and an output amplifier.

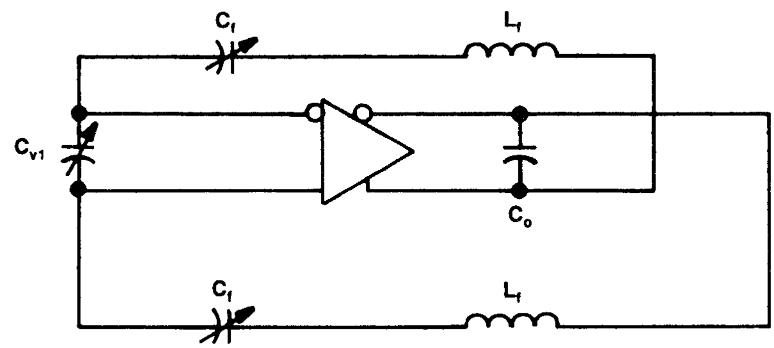
One oscillator is used when the NTSC and PAL-M systems are selected, and the other oscillator is used when the PAL system is desired. A current switch, consisting of two transistors in a differential circuit, selects the appropriate oscillator for the desired system. The P signal line controls the current switch. When high, the PAL oscillator is enabled, and when low, the NTSC and PAL-M oscillator is enabled.

The oscillators operate at approximately eight times the system subcarrier frequency. The NTSC and PAL-M oscillator runs at about 28.64 MHz, and the PAL oscillator runs near 35.44 MHz. Both oscillators are identical in operation, but have different values of frequency setting components.

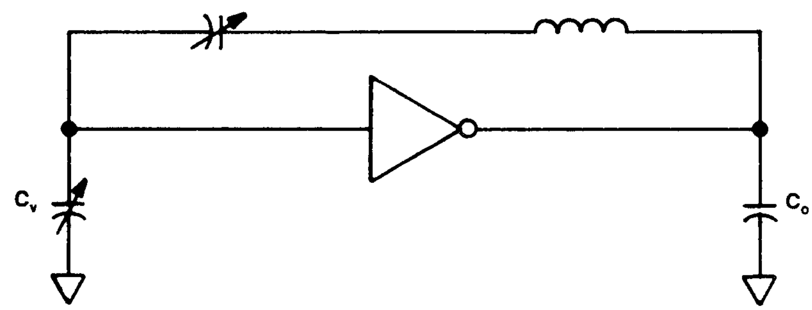
The oscillator and amplifier active devices are three ECL Line Receivers contained in a single integrated circuit. The Line Receivers are used here as differential amplifiers.

The differential circuits produce an oscillator with very little phase noise. This is accomplished because the effects of power supply and ground current variations are minimized in the push-pull configuration, and because the magnetic fields from the inductors are effectively cancelled by placing the two inductors close together.

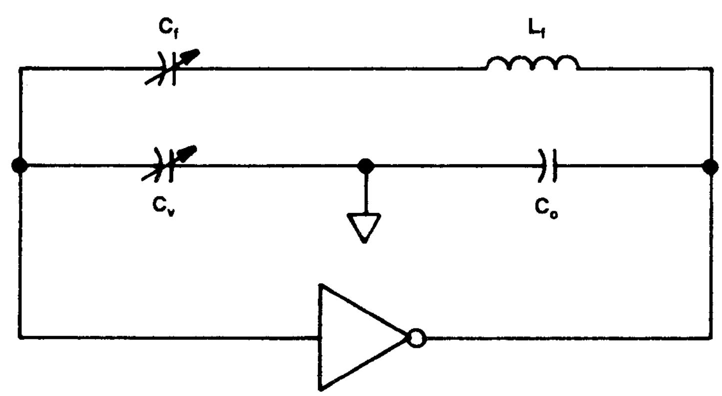
Since the oscillators use differential devices, the circuit can be more easily analyzed by looking at a single-ended equivalent of half of the oscillator. Fig. 4-17 develops differential and single-ended equivalents.



A. Simplified equivalent of differential oscillator.



B. Single-ended equivalent of A.



C. Circuit B re-drawn to show conventional clapp feedback.

2921-17

Fig. 4-17. Simplified Equivalent Circuits of Clapp VCO.

The feedback capacitance actually consists of several capacitors in series-parallel combination. These are mounted on separate circuit boards for each oscillator. These capacitors help provide the oscillators with temperature and mechanical stability. The capacitance is adjusted to set the free-running frequency of the oscillator.

The divider capacitance on the amplifier input, Cv, is varied by the error correction voltage. This capacitance sets the phase-locked frequency.

The oscillator signal is taken at the input of the differential oscillator devices and drives the third section of the Line Receiver. This is wired as a differential inverting operational amplifier. The output is taken from one side of the amplifier and drives the Prescaler.

Prescaler. The Prescaler provides the PLL phase-one and phase-two Clock signals, the ECL Clock signal for the Digital Feedback assembly (A22), and the Strobe signal for the ADC subassembly (A24A1A1).

The phase-one and phase-two Clock signals are derived from the VCO output. An ECL universal four-bit counter divides the eight-times-subcarrier VCO output by five times for NTSC and PAL systems, and by nine times for the PAL-M system. The starting count is preset on the counter data lines. The two lowest data input bits are left floating high, and the two highest bits are controlled by the M signal line from the Digital Feedback board (A22). When PAL or NTSC is selected, the M signal line (shown in the VCO schematic block) is low, setting a seven count on the data lines, allowing the counter to count nine counts before re-loading, thus dividing by nine. When PAL-M is selected, the M signal line is high, placing an eleven count on the data lines. This allows five counts before reloading, thus dividing by five. The resulting output signals for the three systems are:

NTSC = [910*2f(1)]/5 = 364*15.734 kHz = 5.727 MHz

PAL = [1135*2f(1)]/5 = 454*15.625 kHz = 7.094 MHz

PAL-M = [909*2f(1)]/9 = 202*15.734 kHz = 3.178 MHz

This relates as 8/5 of the NTSC and PAL subcarrier frequencies and as 8/9 of the PAL-M subcarrier frequency.

The counter Q2 output drives the common clock input of the dual flop-flop in the Fine Phase Comparator circuit, and also drives the phase-one and phase-two clock TTL converters. The phase-one clock is developed by inverting the Q2 signal, then converting to TTL levels through a common-base circuit and buffering through a TTL inverter.

The phase-two clock is developed by altering the duty cycle of the Q2 output. This is done by performing a NOR operation on the Q1 and Q2 counter outputs. The resulting signal is converted to TTL levels and inverted. The phase-two clock has the same frequency as the phase-one clock, but the rising edge is delayed by 180 degrees, and the falling edge is delayed 270 degrees.

The Strobe and ECL Clock signals are derived by dividing the VCO output frequency. An ECL D-type flip-flop is wired as a divide-by-two counter. It is reset by the Window trigger from the Fine Phase Comparator block.

The Strobe signal uses both outputs. They are differentially driven through a length of twisted-pair transmission line to the connector that feeds it to the ADC board (A24A1A1).

The ECL Clock signal uses the Q-not counter output. An ECL gate produces Differential Output signals. The ECL Clock signal may be disabled by the DO signal from the Clamp block on diagram 7A. The DO signal is decoded from the Digital Feedback board (A22), and is generated for diagnostic purposes.

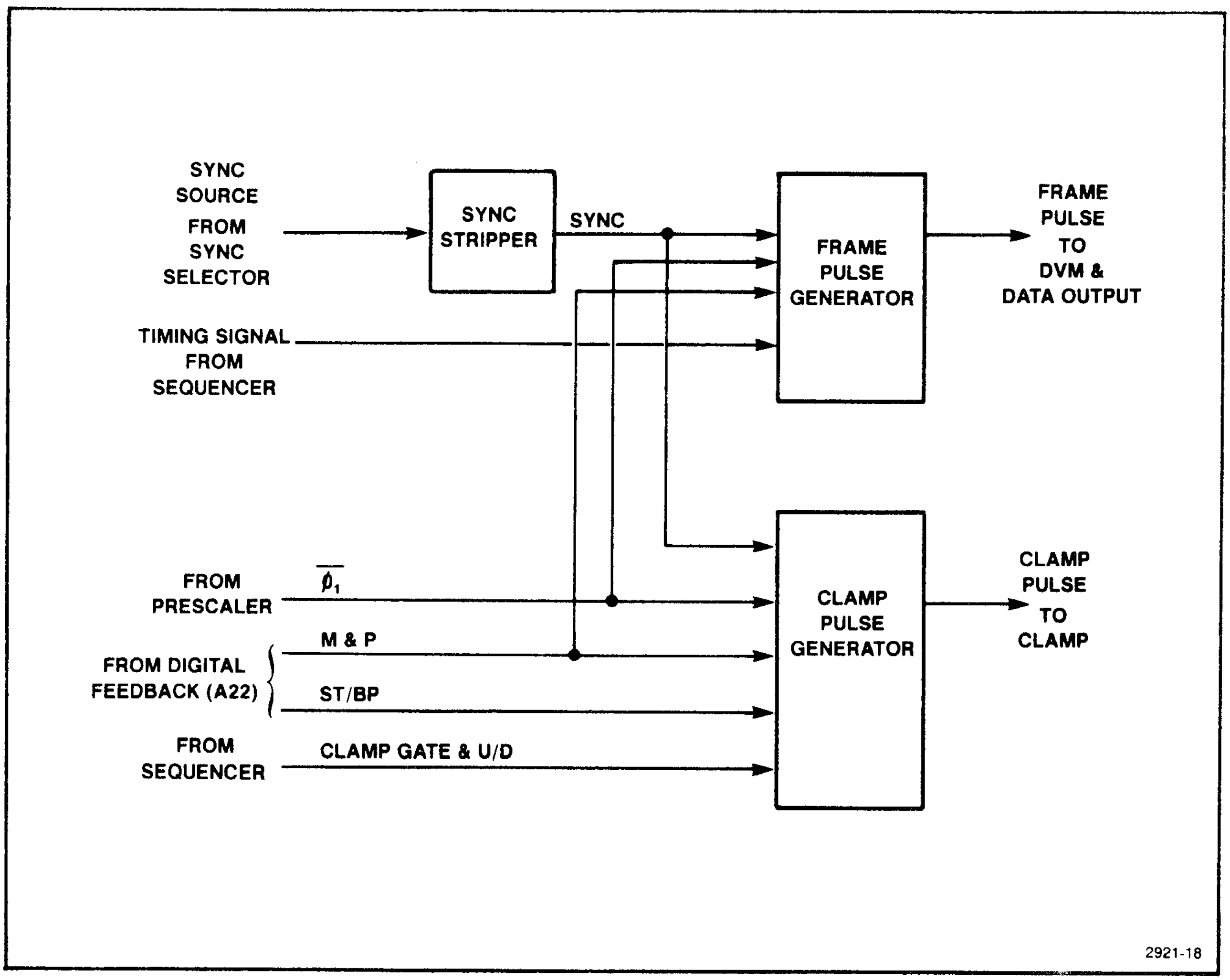


Fig. 4-18. Timing Generator Blocks.

TIMING GENERATORS (Part of 7D)

The blocks in this portion of diagram 7D are shown in Fig. 4-18. They provide the Sync, Clamp Pulse, and Frame-TTL signals.

Sync Stripper

This block extracts the Sync signal from the source selected by the Sync Selector block shown on diagram 7A. The circuit is connected to accept typical video and sync signals. However, shorting plugs can be positioned to allow a "Sound-in-Syncs" signal (this is used in some countries). The Sync Stripper input may be overridden for diagnostics purposes.

Clamp Pulse Generator

The circuits in this block provide the appropriate Clamp Pulse to the Clamp circuit shown on diagram 7A. The Clamp Pulse signal may be selected to occur during either the sync tip or back porch time of video signals in the NTSC, PAL, or PAL-M television systems. The signal timing is generated in the Sequencer block. Selection of the specific signal is done by the M and P control lines from the Digital Feedback assembly (A22). Switching is caused by TEK ANSWER BASIC commands.

Note that the clamp position is relative to the sync source. Problems can occur if the timing of the signal being clamped is offset from that of the sync source.

Frame Pulse Generator

The circuits in this block generate the TTL level Frame Pulse. This signal is used in various places throughout the instrument. The circuit includes two frame pulse generators. One derives the Frame Pulse from the incoming signal when it includes valid composite sync, and the other generates a default frame pulse to operate the instrument with no sync input or during diagnostics.

With composite sync on the incoming signal, the Frame Pulse is a negative-going pulse lasting one tv line, and occurs once each tv frame. It is during the odd field for NTSC and PAL and the even field for PAL-M (because of the way fields are counted).

The circuit checks the incoming sync to see that it contains valid frame information. One counter checks that the serrated (broad) pulses are the proper width, then another counter checks for a minimum number during the vertical interval.

The V WDO and Phase Lock Windows signals are combined by a NAND gate. This creates a signal that is high during times that the incoming vertical serrated pulses are expected to be low, and low when the incoming horizontal sync and equalizer pulses are expected to be low. That signal is clocked by the Prescaler Phase-one clock through a D flip-flop.

Next, the flip-flop output is fed to a three-input NAND gate along with the Sync signal (derived from the Sync Stripper) and the Carry output of a counter. Assuming the Carry output to be high initially, the gate enables a counter during the vertical serrated pulses, when the clocked Windows and Sync are both high (active).

The counter is loaded with a four count every half line by a combination of the Line Center and Line Start (not) timing. The Prescaler phase-one signal clocks the counter. When enabled, the counter counts from four down to zero, then the Carry line goes low, disabling this counter, but enabling a following counter. This checks that sync signals are at least four phase-one clock pulses wide, or wide enough to be serrated pulses.

The second counter is loaded to a count of five, and clocked by the half line-rate signal. When enabled, the counter checks that there are at least five serrated pulses in the vertical interval. This counter can be disabled for diagnostics (thus enabling the default frame pulse) when both the M and P system selection lines are high.

The output of the counter feeds a D flip-flop, and is clocked through by the clocked frame Windows signal. If the valid frame is not present, the default frame generator will reset this flip-flop.

Either the valid or default frame timing signal is clocked by the Line Start signal through another D flip-flop to become the Frame TTL signal.

The default Frame Pulse is two tv lines wide, and occurs once about every 42 milliseconds. The Line Start signal drives a divide-by-128 counter formed by two cascaded four-bit counters. When the 128 counts are completed, the counter resets itself, and the output enables a divide-by-five counter also clocked by the Line Start signal. When this counter reaches its full five counts, the Carry output resets the first flip-flop in the Frame TTL output.

The total period between default frame pulses is 640 Line Start periods, or about 42 milliseconds. This is long enough so that a valid frame pulse will reset the circuit before it can provide an output. Valid NTSC and PAL-M frame pulses occur every 525 lines, and valid PAL frame pulses occur every 625 lines. When a valid Frame Pulse occurs, it resets both of the counter circuits in the default frame generator.

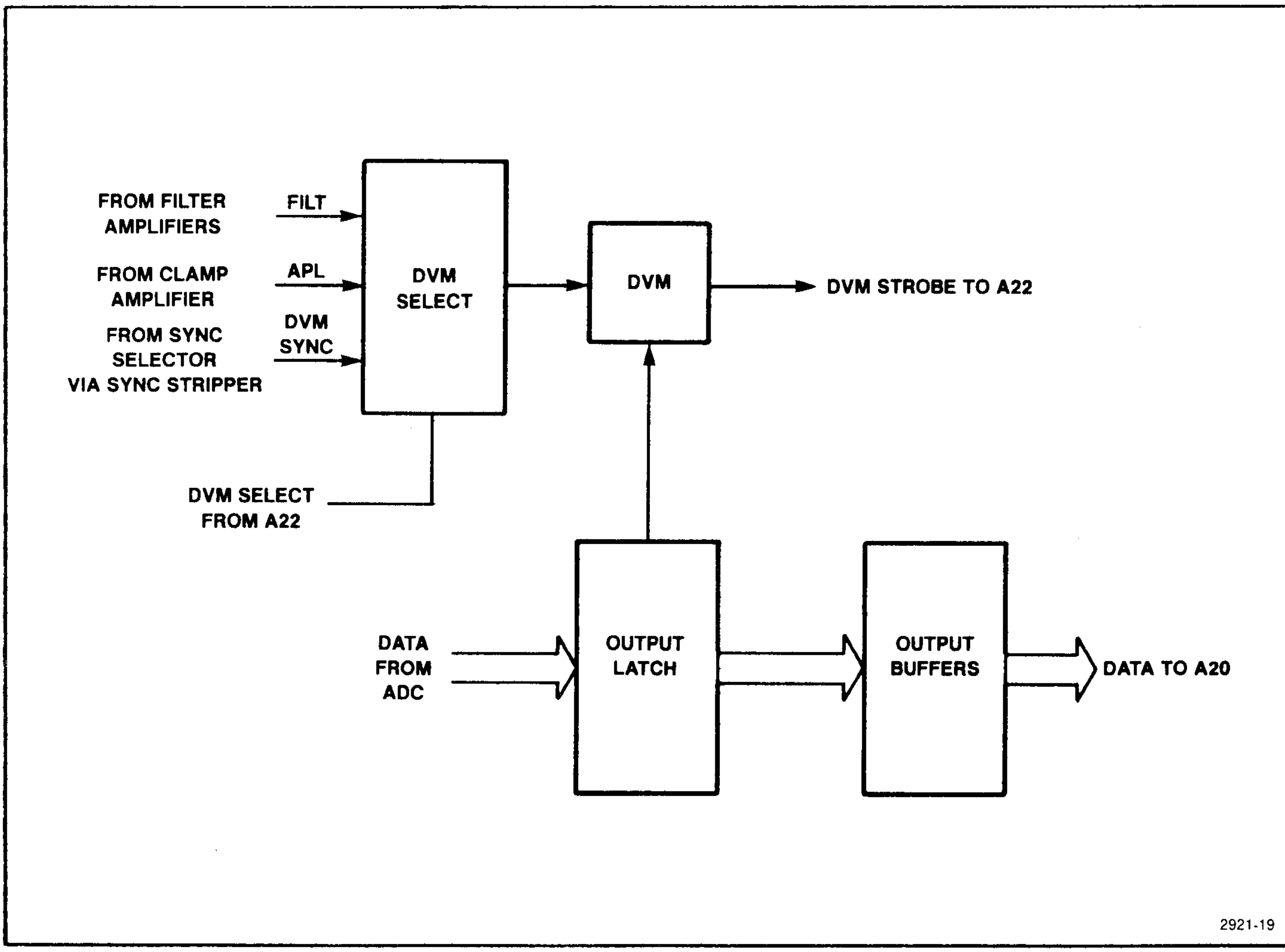


Fig. 4-19. DVM and ADC Data Output Blocks.

DVM AND ADC OUTPUT (Part of 7E)

The blocks in this portion of diagram 7E are shown in Fig. 4-19.

DVM

This block forms the basis for a digital voltmeter, and also provides the ECL Frame Pulse signal.

The DVM circuit measures voltage levels from several sources. Sources are selected by control lines from the Digital Feedback assembly (A22). The source is determined by TEK ANSWER BASIC commands. The DVM sources are:

APL - the Clamp circuit output.

FILT - the Filter circuit output.

SYNC (DVM) - the Sync Selector output.

EXT - an unused input source.

The DVM output is a negative-going, TTL-level pulse called DVMVAL. The time difference between the DVMVAL pulse and the Frame Pulse is proportional to the amplitude of the signal being measured. The pulse goes to the Digital Feedback assembly (A22) where a counter translates the time difference to an eight-bit digital word.

The ECL Frame Pulse is also formed in this block. The signal is essentially the Frame Pulse translated to a differential ECL level output.

Both the DVMVAL pulse and the ECL Frame pulse may be overridden for diagnostics purposes.

ADC Data Output

The circuits in this block provide differential ECL level outputs to the Memory Controller assembly (A20). The signal outputs include the eight-bit data and 14 MHz from the ADC (A24A1A1) and a latched frame pulse. The outputs may be overridden for diagnostics purposes.

MEMORY CONTROLLER (A20)

The Memory Controller assembly (A20) interfaces between the VDC (A24), Acquisition Memory (A18), and CPU (A10) assemblies. The VDC synchronizes the Memory Controller to the digitized signal, and passes the data through the Memory Controller to the Acquisition Memory. The Memory Controller generates addresses and memory control signals for the Acquisition Memory. This tells the Acquisition Memory which samples to save and which samples to skip.

The CPU addresses and communicates with the Memory Controller over the CRU Bus. There are four files accessed on the board. They are the Control File, Instruction Limit File, Instruction Memory File, and the Status File. The CPU reads from the Status File, and writes into the other three files.

A state machine generates control signals for the other circuits. Another state machine generates the row and column address control signals for the Acquisition Memory.

Memory addresses for processor or controller addressed Acquisition Memory are generated on this board. Refresh addresses are also generated on the board.

Fig. 4-20 shows the block diagram of the board.

Decoder

The Decoder monitors the CRU Address Bus, and enables the board for addresses 1000 through 144F (hex). This block generates the read and write enable signals, and decodes the data on the CRUOUT line from the CPU to provide parallel data lines. The eight data bits write into the Instruction Memory, the Control File, the Instruction Limit File, and (for signature analysis) into the Instruction Counter and State Control blocks.

VDC Interface

The sampled data (Bits 0 through 7) and the A/D Clock and Controller Frame Pulse (CFP) signals are connected by cable from the VDC (A24). In this block, they are converted from differential ECL-levels to single-ended TTL-level signals. The CFP and 14C (clock) signals drive the Instruction Counter, and the 14C and A/D Clock signals drive the Clock and Control signal block. The TTL-level data bits are fed by cable to the Acquisition Memory board (A18).

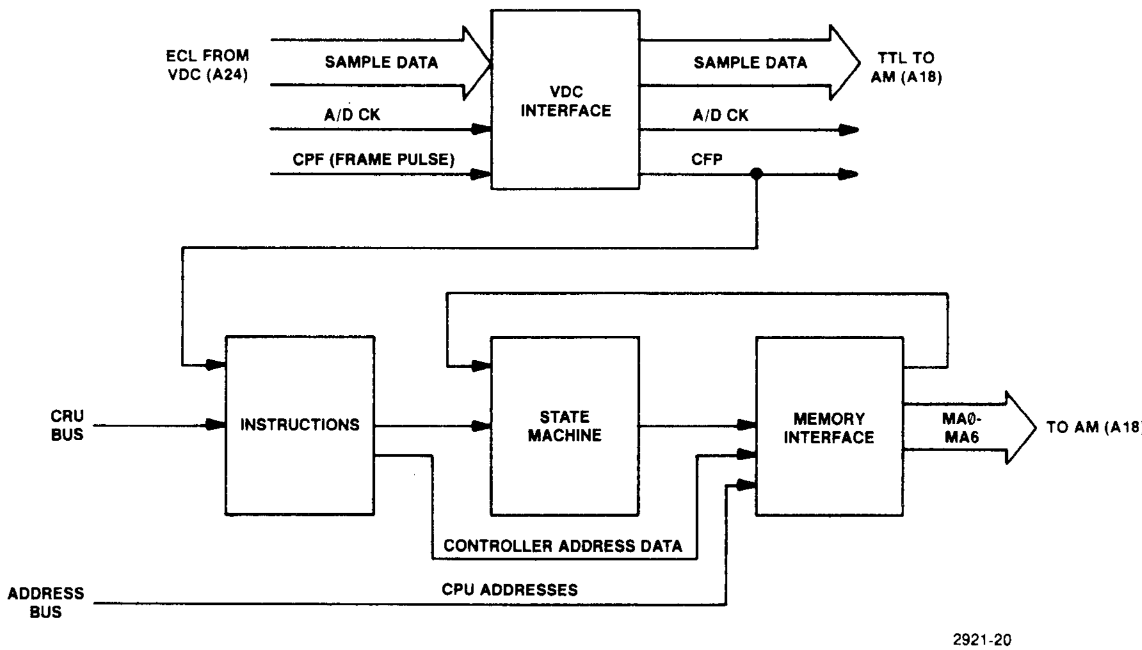


Fig. 4-20. Memory Controller (A20) Block Diagram.

Instruction Counter

This block provides Instruction Memory addresses from either the Address Bus or from a four-bit counter, as selected by the Control Files State Machine (SM) Enable signal. Circuits in this block also provide various timing signals. The (Frame) Sync signal is generated here and it drives the State Control block. There are also three 7-MHz clock signals derived from the CFP and 14C signals.

Instruction Limit File

The Instruction Limit File sets the number of valid instructions by specifying the last valid instruction. The Decoder writes the decoded CRU data corresponding to the last instruction into the file. That Instruction Counter data is compared against the last instruction data, and when the two match, the Instruction Limit signal is issued to the State Control circuit.

Instruction Memory

The Instruction Memory is a file that contains sixteen thirty-two-bit instructions. The instructions give the starting address, the array size, and the skip and save values. The output data loads the Skip, Save, Array Size, and Save Address Counters. The memory is addressed through the Instruction Counter circuit by four CRU address bits or by the Instruction Counter. The memory enable signals and data are from the Decoder circuit.

Control File

The Control File allows the CPU to set eight control flags. The Decoder writes the decoded CRU data into the file. The output drives various circuits.

State Control

The State Control circuit generates addresses for the State Decoder circuit. The State Control circuit is a five-bit state machine. A state machine is a circuit whose input is a function of its output, so that the next state depends upon the present state. Fig. 4-21 shows a block diagram of the type of state machine circuit used here.

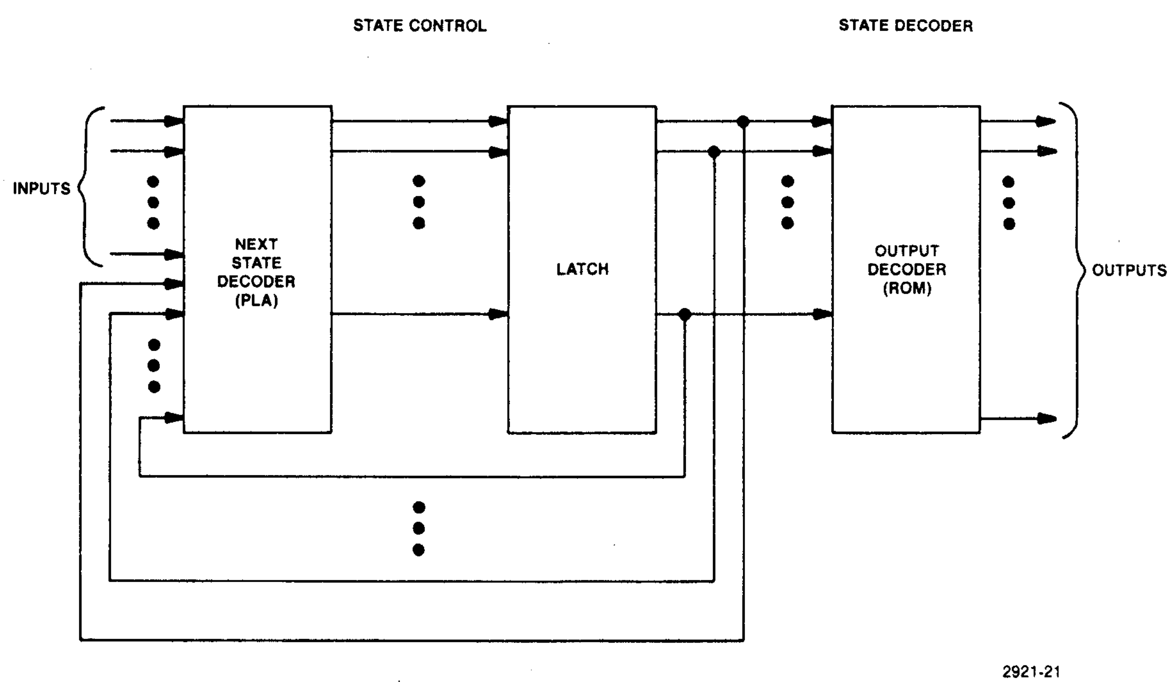


Fig. 4-21. State Machine Block Diagram.

A Field Programmable Logic Array (FPLA) generates five signals representing the next state. These are latched and become the present-state signals. The present-state signals drive the address lines of the ROMs in the State Decoder, and are fed back to the input to help determine the next state. The state machine also has a number of other inputs, including CRU data and various control and timing signals.

For diagnostic purposes, the next-state signals are fed to the Status File, to be read onto the CRUIN data line. Also, jumpers allow switching the input to the latch so that it is driven by five decoded CRU data bit lines rather than the next-state lines. This allows breaking the loop for troubleshooting, and inserting signature analysis data.

State Decoder

The State Decoder expands upon the State Control present-state outputs to provide twenty-three control lines to various circuits on the board. The circuit also receives a 7-MHz clock signal to latch some of the output signals.

Status File

The Status File supplies the individual status flags to the CPU via the CRUIN line. Most of the data is used only for diagnostics. Various signals feed data to the circuit.

Skip Counter

The Skip Counter controls which VDC data samples are not stored in the Acquisition Memory (A18). The Instruction Memory loads the counter with data, and signals from the State Decoder control the counter. The circuit is clocked at a 7 MHz rate. The counter provides the Skip and Repeat signals to the State Control FPLA.

Save Counter

The Save Counter controls which VDC data samples to store in the Acquisition Memory (A18). The Instruction Memory loads the counter with data, and signals from the State Decoder control the counter. The circuit is clocked at a 7 MHz rate. The counter provides the Save signal to the FPLA in the State Control state machine.

Array Size Counter

The Array Size Counter controls the size of the array of sample data to be saved. The Instruction Memory loads the counter with data, and signals from the State Decoder control the counter. The circuit is clocked at a 7 MHz rate. The counter provides the Array Limit signal to the FPLA in the State Control state machine.

Save Address Counter

The Save Address Counter generates the Acquisition Memory (A18) addresses for the sampled data to be stored at. The Instruction Memory loads the counter with data, and signals from the State Decoder control the counter. The circuit is clocked at a 7 MHz rate.

Row/Col Control

This circuit provides row and column address control signals for storing data on the Acquisition Memory (A18) board. The circuit consists of a four-bit state machine clocked by the A/D Clock signal. Other inputs include a signal from the State Decoder circuit and a 7-MHz clock signal.

The Row Select and Column Select signals control whether a row address or a column address is sent. The MRAS and MCAS signals are the Acquisition Memory (A18) row and column address strobes.

The MROW/MCOL signal feeds the Status File to inform the CPU whether row or column addresses are being sent.

Four jumpers allow breaking the state machine feedback loop for troubleshooting.

CPU Access AM Addresses

This circuit enables CPU-generated row and column addresses to the Acquisition Memory (A18) when the CPU has control of the memory. Addresses are from the CPU Address Bus, and the CPU row and column select, and refresh are provided.

Controller Access AM Addresses

This circuit enables Memory Controller-generated row and column addresses to the Acquisition Memory when this board has control of the memory. Addresses, row and column control, and refresh are all provided by the Memory Controller board (A20).

Refresh Control

This circuit provides addresses to the Acquisition Memory (A18) during refresh cycles when the Memory Controller (A20) has control of the memory. A counter generates the addresses.

Clock and Control Signals

The circuits in this block provide clock and control signals to the Acquisition Memory (A18).

This block also includes the OUTPUT INTENSIFY circuit. This circuit produces an output pulse during the sampled video line or lines. This drives a 75-ohm terminated output connector on the 1980 rear panel. The signal brightens the sampled lines on a picture monitor when connected to the monitor loop-through output.

The circuit is enabled by a signal from the Control File (decoded from the CRUIN line), and is driven by the Flag signal from the State Decoder.

ACQUISITION MEMORY (A18)

The Acquisition Memory board (A18) stores data samples, collected by the Video Data Converter (VDC A24), until the CPU board (A10) is ready for them. This description refers to the Acquisition Memory block diagram shown in Fig. 4-22.

The VDC samples data much faster than the CPU can receive the data. Since the Memory Controller (A20) handles all data from the VDC, the Acquisition Memory provides an interface between the Controller and the CPU boards.

Data flow through the Acquisition Memory board consists of two independent functions that occur between the two board interfaces. On one side, the Video Interface, the Memory Controller accepts data from the VDC, processes it, and passes it to the Acquisition Memory. At the other side, the Processor Interface, the CPU can read and process the data from the Acquisition Memory as it becomes available. The CPU can also write data into the memory. A switch (P/V) selects the Processor or Video functions.

The Acquisition Memory board consists of six functional blocks as follows:

1. Memory Banks
2. Address Decoder
3. Data Out Buffers
4. Data In Buffers
5. Enable Signal Generator
6. Video Sample Accumulator

Memory Banks

The Acquisition Memory (diagrams 9C and 9D) has a total storage capacity of 16K (1K = 1024) sixteen-bit words. These are organized with 4K words in each of four memory banks. A bank consists of a group of sixteen 4K memory chips. All 4K memory words in each bank are individually addressed by fourteen address lines.

Memory access requires a series of precisely-timed control signals. The Memory Controller provides seven address lines (MA0 - MA6) to select a memory location. The fourteen-bit address is separated into two seven-bit addresses, one for the row and one for the column of the memory location. The Controller sends a row address first, pauses, then sends a column address.

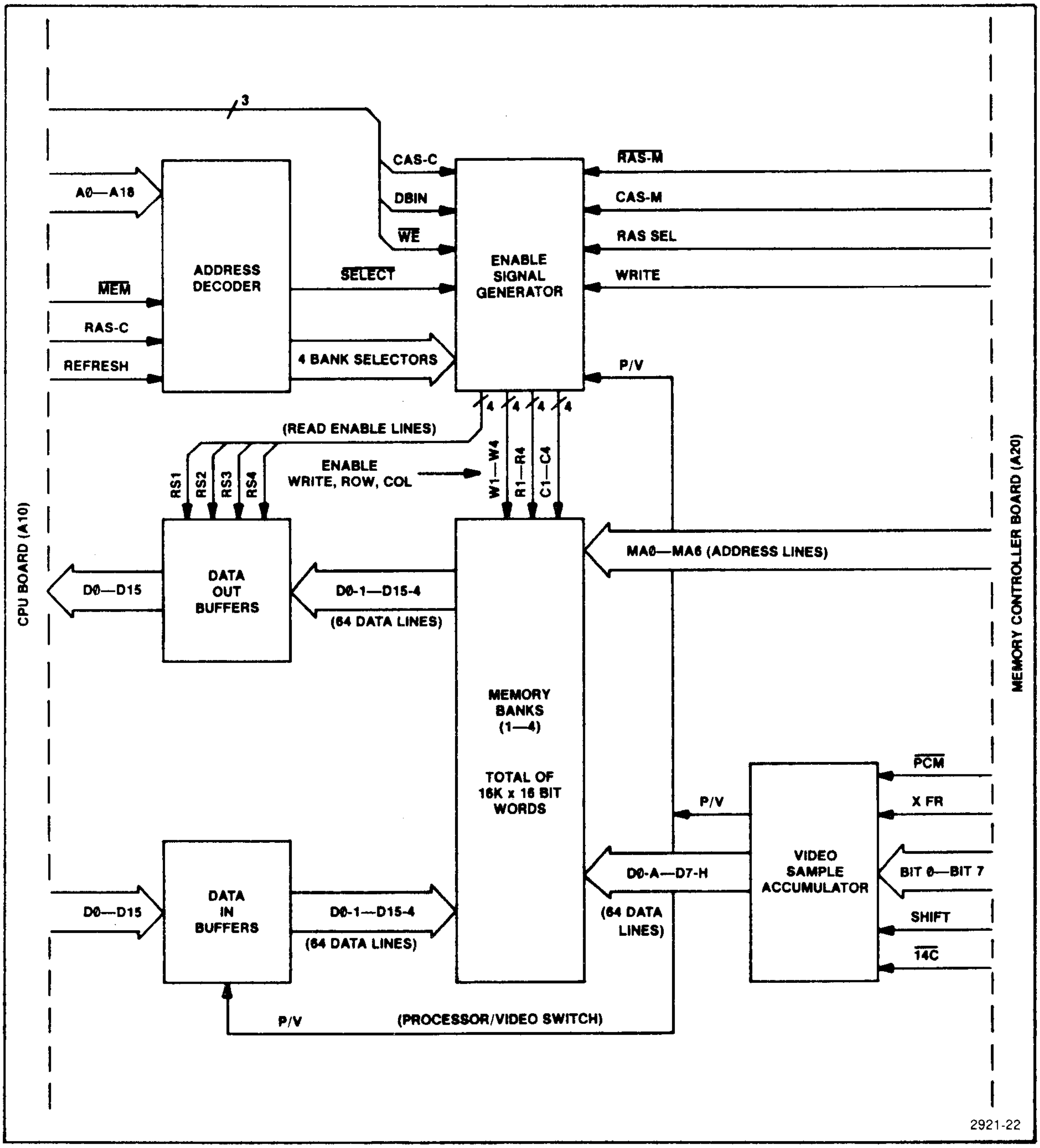


Fig. 4-22. Acquisition Memory (A18) Block Diagram.

The Acquisition Memory combines the row and column address lines with other control signals to latch the address. A row address with either RAS-C or RAS-M generates one of the row enable signals (R1 - R4). A column address with either CAS-C or CAS-M generates all of the column enable signals (C1 - C4). Only the corresponding memory bank (1 - 4) receiving both row and column enable signals can latch the address.

To Write into the memory, a write pulse (WRITE from the Controller, or WE from the CPU) is required. The Acquisition memory accepts data from either the Data In Buffers or the Video Sample Accumulator. Once the memory latches the address, the write pulse enables the addressed memory bank, which stores the data word.

A read operation is assumed if a write pulse is absent. Only the CPU Processor can read the memory. The addressed memory bank presents the data to the Data Out Buffers. When DBIN is active, these buffers pass the data on to the CPU.

Address Decoder

This block (diagram 9A, left side) is only enabled during Processor control of the Acquisition Memory. It continuously monitors the CPU address lines (A0 - A18). Jumper I on P612 is connected, causing the Acquisition Memory Board to respond to hexadecimal (hex) addresses C0000 through CFFFE.

Memory can be accessed only when the MEM line is active. Upon detecting an address within the valid range, the decoder forces the SELECT signal active. The two lowest address bits (A0 and A1) determine which bank is accessed. Banks are addressed as follows:

MEMORY BANK	LAST DIGIT OF (HEX) ADDRESS
1	0 or 8
2	2 or A
3	4 or C
4	6 or E

The address decoder waits for RAS-C to indicate that row addresses are stable, then activates the Bank Selector line for the addressed bank. If the REFRESH signal is active, all four Bank Selectors are enabled to refresh all memory rows simultaneously.

Data Buffers

The Data Out Buffers (diagram 9A, right side) provide a one-way path to transfer sixteen data bits from Acquisition Memory to the CPU Processor. Sixteen lines each from the four memory banks feed the sixty-four buffers in this block. During a CPU read operation, the Enable Signal Generator enables only one bank at a time.

The Data In Buffers (diagram 9B, right side) provide a one-way path to distribute sixteen data bits from the CPU Processor to all four Acquisition Memory banks at once. The P/V switch enables the transfer only during a CPU Write Operation. Data is actually written only to an addressed memory bank, which has received both ROW and COL signals.

The sixty-four data lines between the Acquisition Memory and the Data Buffers are labelled as follows:

MEMORY BANK	LABEL
1	D0-1 to D15-1
2	D0-2 to D15-2
3	D0-3 to D15-3
4	D0-4 to D15-4

Enable Signal Generator

This block (diagram 9A, middle) provides the timing signals to perform read, write, or refresh operations on the Acquisition Memory. The control signals come from either the Memory Controller or CPU Processor interface; the P/V switch selects which one.

Processor Interface. If the CPU Processor is in control, RAS SEL is inactive to enable refreshing the Acquisition Memory. It also lets the Bank Selector lines through the Enable buffers to generate the ROW signals (R1 - R4). When the column address is ready, the P/V switch lets CAS-C through the Enable buffers to generate the COL signals (C1 - C4).

For any type of access to Acquisition Memory, the P/V switch determines which signals cause the memory to respond. During a CPU Write, the switch lets the WE signal through the Enable buffers to generate the write signals (W1 - W4). These write the data into the addressed memory bank. During a CPU Read, the switch uses DBIN to generate the read enable signals (RS1 - RS4). These enable the Data Out Buffers to pass the data from the Acquisition Memory to the CPU.

Video Interface. When the Memory Controller controls the Acquisition Memory, the P/V switch changes polarity. RAS SEL becomes active, which disables refresh for the memory. The video sample and storage rate is fast enough that memory refresh is unnecessary. The Video interface only stores samples in the memory, it never reads data back.

The Enable Signal Generator cycles through the memory control signals in the same sequence as above. The Memory Controller provides the control signals instead of the Processor. The now active RAS SEL lets RAS-M generate the ROW signals. The inverted P/V switch lets CAS-M generate the COL signals, and lets WRITE generate the write signals. The Video Sample Accumulator contains the data to be written to the memory.

Video Sample Accumulator

This block (diagram 9B, middle) accumulates eight data bytes (sixty-four bits) before writing them into the Acquisition Memory. When the Video Interface controls memory, the P/V switch enables the Accumulator output. All sixty-four data bits are then written into memory using the control sequence of the Enable Signal Generator.

The Memory Controller provides all the control signals to accumulate the data bits. It receives data samples collected by the Video Data Converter, and sends each group of eight bits to the Acquisition Memory. While the SHIFT line enables all the shift registers, a clock signal (14C) latches each bit into a separate shift register in the Accumulator. When the next group is ready, the Accumulator shifts them into the register and pushes the previous bits ahead.

When all sixty-four bits are received, the bytes are arranged in the Accumulator in eight registers. Each bit of one byte occupies the same position in each shift register. They are labelled as follows:

BYTE RECEIVED	DATA LINES
1	D0-A to D7-A
2	D0-B to D7-B
3	D0-C to D7-C
4	D0-D to D7-D
5	D0-E to D7-E
6	D0-F to D7-F
7	D0-G to D7-G
8	D0-H to D7-H

The XFR signal transfers the sixty-four data bits to the output register, and the P/V switch enables the output which presents the data to memory.

DIGITAL FEEDBACK ASSEMBLY (A22)

The Digital Feedback (DFB) board (A22) dynamically controls the gain, dc offset, and dither of the analog signal through the VDC (A24), controls the VDC switching functions, and converts the DVMVAL timing to data corresponding to the measurement amplitude. The board interfaces between the CPU Bus structure and the VDC assembly (A24). Fig. 4-23 shows a block diagram of the assembly.

The CPU communicates with the board over the Data Bus and Address Bus. Separate lines transfer data from the board to the VDC, and signals from the VDC to the board. The Digital Feedback board has hardware circuits that contain four sets of data files. They are Pattern File, Control File, Setup File, and DVM and Diagnostics File. These are all addressable by the CPU.

Decoder

The Decoder monitors the Address Bus for software memory addresses from 02000 through 02FFE (Hex). When the memory enable signal (MEMEN) is active and an appropriate address is detected, the circuit generates chip enable, read enable, and write enable signals for the various circuits on the board.

Pattern File

The Pattern File contains the time, gain, offset, and dither instructions. The circuit consists of a 256-by-32 memory array that contains 256 two-word instructions. Each sixteen-bit word occupies an address space, for a total of 512 word addresses. The address source is either the Address Bus or the Instruction Counter. Data can be written into the memory from the Data Bus, and can be read from the memory onto the Data Bus.

Control File

This file contains the individual control flags. The file consists of eight bits that are latched (written) from the Data Bus. The control flags control various board functions.

Setup File

This file contains input selection parameters for the VDC. The sixteen-bit-wide file has two-way communication (read-write) with the Data Bus. The data feeds the VDC.

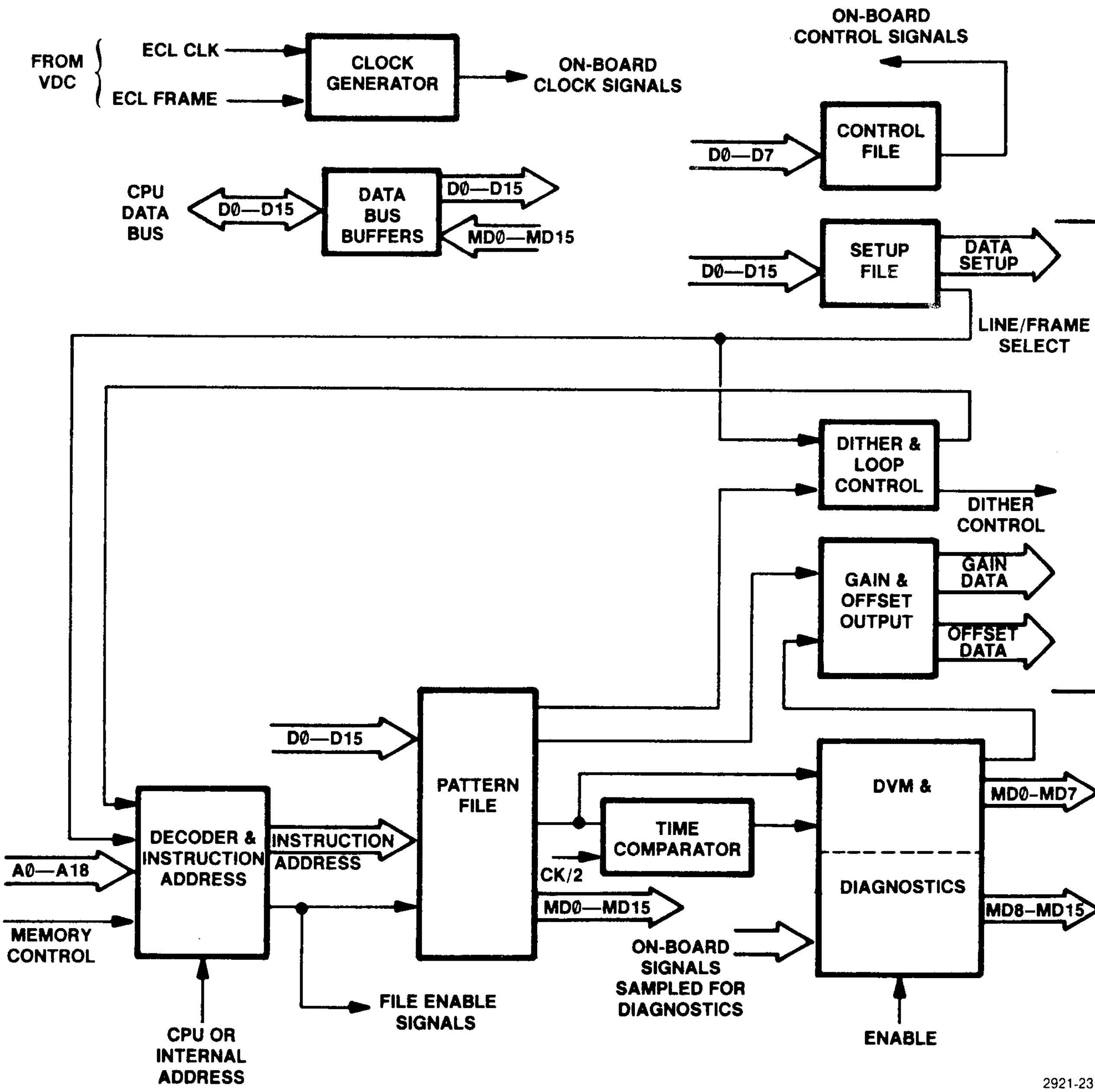


Fig. 4-23. Digital Feedback (A22) Block Diagram.

Clock Generator

This block converts the ECL-Clock and ECL-Frame pulses to TTL levels, and supplies the Sync, Clock, Clock B, and Clock/2 signals.

Time Comparator

The time data loaded in the Pattern File memory is compared with a counter. The output occurs when the counter and time data are the same. The time counter Reset signal is derived from the Frame Pulse, linking it with the DVMVAL timing.

DVM and Diagnostics File

This sixteen-bit-wide file contains eight bits of DVM data and eight bits of diagnostic status flags. The file data is collected on the board and read onto the Data Bus.

The DVM amplitude data is determined by measuring the time (via the Time Comparator) between the Frame Pulse and the DVMVAL signal. This is proportional to the amplitude of the DVM input signal in the VDC assembly (A24). The associated time value from the counter in the Time Comparator circuit is latched and read onto the Data Bus when the DVM file is called.

Diagnostic data includes various signals used on the board.

Gain and Offset Output

The gain and offset data from the Pattern File is latched, and after a delay, gated to the VDC assembly as single-ended ECL-level signals.

Instruction Address

This block selects between the Address Bus and a counter as the address source for the Pattern File memory. When time comparison is required, an internal instruction counter supplies the addresses. When CPU control is required, the Address Bus supplies the addresses.

Dither and Loop Control

Data from the Pattern File generates the D-Gate and D-Reset signals that are fed to the VDC. The same data bits, along with other timing control signals, generate loop control signals for the instruction counter in the Instruction Address block. The Gen Latch and Time Comparator Reset signals are also generated in this block.

POWER SUPPLY (A60)

The A60 Power Supply assembly provides electrical power for the 1980. The power supply uses switching circuitry for high efficiency, small size, and low weight. The power is distributed via the A50 Main Interface board to the other assemblies. A fan in the assembly cools the instrument. The assembly is contained in an enclosure and mounted in the rear of the 1980. The entire power supply assembly is removable as a unit.

The power supply contains the following circuit boards:

A60A1 Inverter

A60A2 Regulator

A60A3 Fan Regulator

A60A4 Line Filter (620-0286-01 and up)

When reading the following description, refer to the schematic diagrams and to the appropriate figures with the text. Fig. 4-24 shows a block diagram of the power supply assembly, and Fig. 4-25 shows a simplified schematic of the power supply switching circuitry.

Switching Power Supply Overview

The switching transistor section or "chopper" sends current through the primary windings of transformer T11, first in one direction and then in the other direction. The secondary windings of transformer T11 produce a pulse-width modulated square wave signal which is rectified and filtered with a choke-input smoothing filter. The average +5 V dc voltage at the output of the filter can be varied by varying the duration of the pulses from the switching transistor section.

The Inverter Control Logic circuit controls the switching transistors by using three signals. The first is from the 40 kHz oscillator within the Inverter Control Logic section. The second is a sample of the +5 V output (+5 V sense), and the third is a +5 V reference voltage from the Control Power block as shown in Fig. 4-24. The +5 V reference voltage is compared to the +5 V output supply.

On every other negative pulse from the oscillator, the Inverter Control Logic permits current to flow through one half of the primary windings of base-drive transformer T211. This current flow switches on its corresponding switching transistor, Q201 or Q202, which in turn supplies current to the primary winding of power transformer T11.

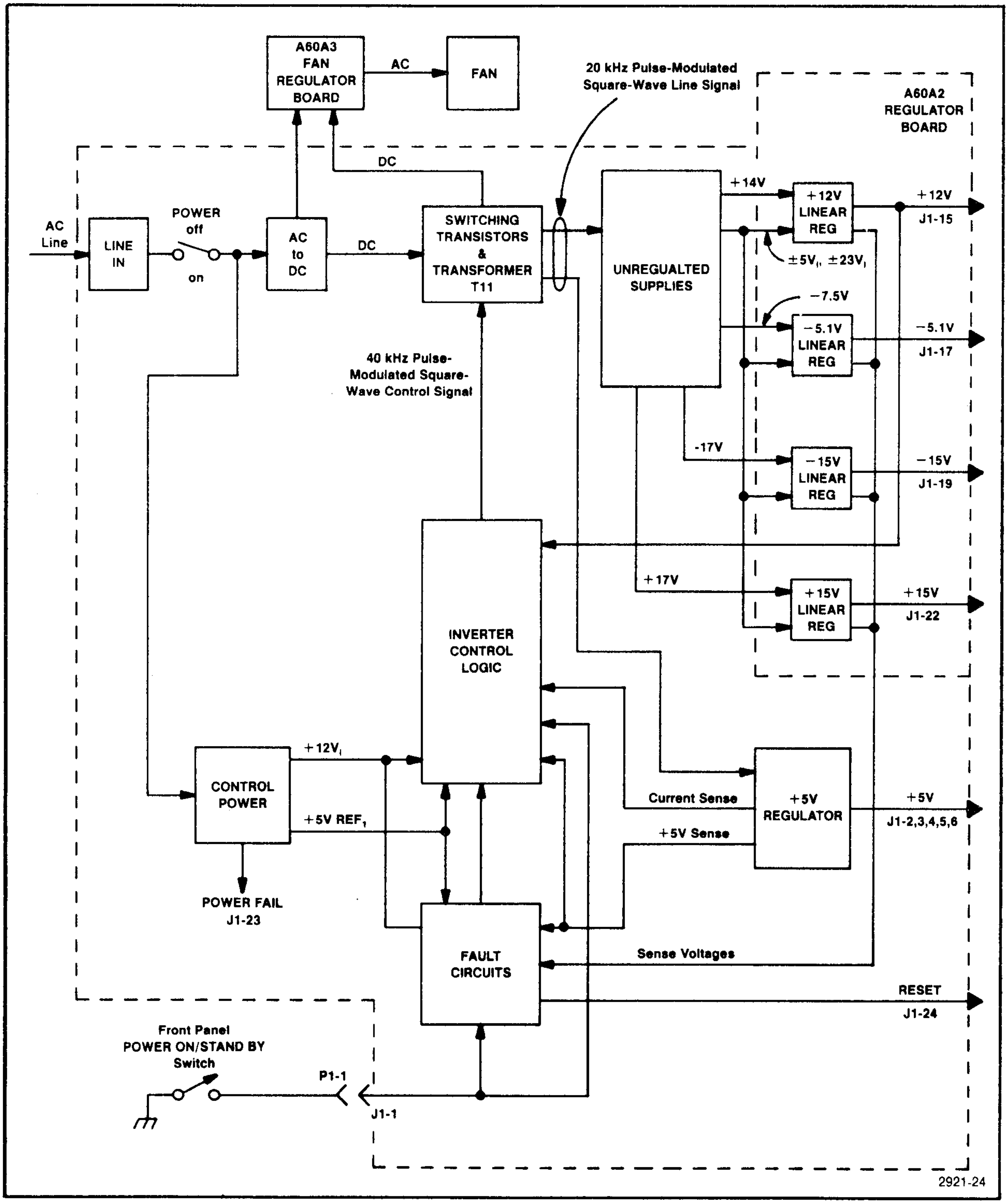


Fig. 4-24. Power Supply (A60) Block Diagram.

As long as either switching transistor is switched on, a dc pulse is present at the Smoothing Filter and Unregulated Supply sections. A filter capacitor (C541) charges, producing an increasing voltage at the +5 V supply's output. The Inverter Control Logic circuit monitors this increasing voltage and compares it to the reference voltage.

When the +5 V output reaches the level of the reference voltage, the Inverter Control Logic circuitry turns off the switching transistor, Q201 or Q202. This shuts off the dc pulse at the input to the Smoothing Filter and the +5 V supply output starts to decay, depending upon the load. This decay continues until the next pulse from the divide-by-two circuit (see Fig. 4-25) causes the Inverter Control Logic to turn on the switching transistor that was off. The current flow in the primary winding of T11 is now in the opposite direction. However, the full wave rectifier (CR131 and CR231) in the +5 V Regulator circuit rectifies this current as a positive pulse and starts charging C541 again.

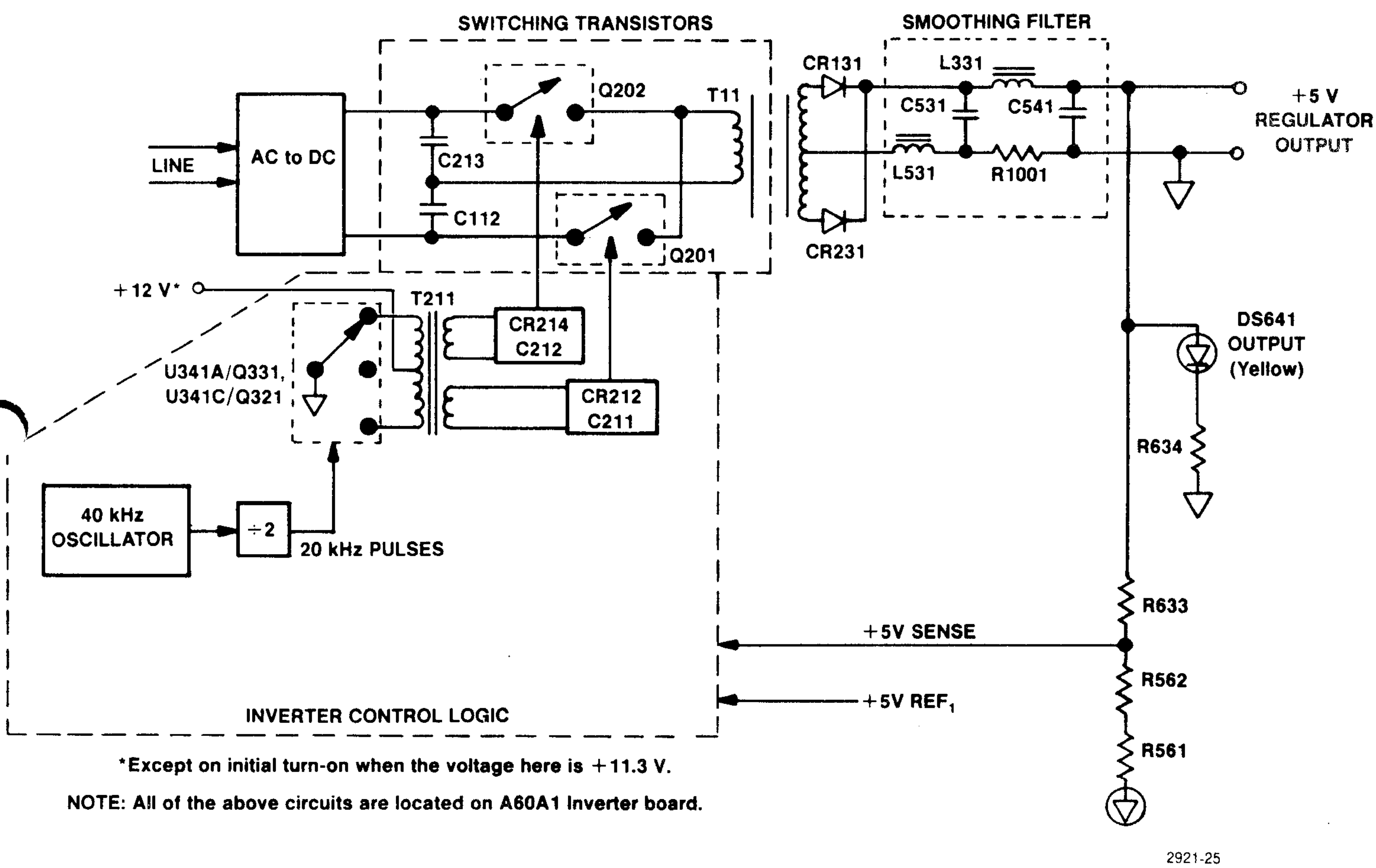


Fig. 4-25. Switching Power Supply Simplified Schematic.

Detailed Description of Blocks

INVERTER AND +5 V (Diagram 11A)

Line In

When the rear-panel POWER switch S1001 is set to ON, the primary circuit (up to the two switching transistors, Q201 and Q202) remains energized regardless of the status of the front-panel STANDBY/ON POWER switch S100. Also under these conditions, the voltages developed in the Control Power block are present.

A red light-emitting diode (LED) DS642 illuminates when the rear-panel POWER switch is set to ON. Current for DS642 is obtained from the +12 V supply which comes from U631.

The LINE SELECTOR switch (S501) sets up the T511 primary circuit and the AC-to-DC Common line to accept either 115 V or 230 V mains voltages. Two spark gaps, E401 and E411, are present for over-voltage protection in case the instrument is accidently plugged into a 230 V source when the LINE SELECTOR switch S501 is set to 115 V. Thermistors RT411 and RT412 limit surge current to the AC-to-DC bridge rectifier circuit.

Control Power

The Control Power section is used to provide +5 V(1) reference and +12 V(1) to power the Inverter Control Logic and Fault Circuit sections. The +5 V(1) reference is obtained from VR451. The +12 V(1) voltage is obtained from the secondary winding of T511. The output is rectified by CR531 and regulated by U631.

A line-sensing circuit is provided for the 1980. This circuit senses from the mains frequency transformer T511 via the following components: CR521, CR522, U621B, U621A, and C621. If the line voltage applied to T511 is sufficiently high, C621 will remain discharged.

If the line voltage drops below a set value or is not present, C621 starts charging. After a certain time delay, U621A trips and sends a Power Fail signal through U622B and Q621 to the A50 Main Interface board. The signal is applied to A10 CPU board to signal that the power has failed. The CPU then saves the information in the instrument memory. When power is restored, the instrument provides a diagnostic message saying that the power had been interrupted.

The output of the power fail circuit is also used to maintain the charge of the nickel-cadmium batteries used in the CMOS memory and Real-Time Clock of the A16 Non-volatile Memory board. The batteries

receive current from the Power Fail line when the rear-panel POWER switch S1001 is set to ON and the front-panel POWER ON/STANDBY switch S100 is set to STANDBY. When S100 is set to ON, the batteries receive charging current through the A16 NVM board supplies (derived from the switching supplies) when the NVM and RTC switches on the board are set to ON.

One of the uses for the +12 V supply is to illuminate red LED DS642 when the rear-panel POWER switch S1001 is set to ON. This light indicates that the line voltage is applied to the power supply.

AC-to-DC

The AC-to-DC section uses a full wave bridge to convert the voltage from ac to dc. If the LINE SELECTOR switch, S501, is set to the 115 V position, the rectifiers and capacitors (C421 and C521) form a voltage doubling circuit. This results in approximately 300 Vdc across these two capacitors. If the incoming line voltage is 230 Vac and S501 is set to 230 V, the voltage doubling circuit is eliminated. The 230 Vac voltage is full wave bridge rectified and the 300 V appears again across C421 and C521.

The voltage on capacitors C421 and C521 provides power to a relaxation oscillator consisting of neon light DS311, R421, and C311. When C421 and C521 are charged, the light flashes.

Transformer T311 and associated circuitry perform electromagnetic interference (EMI) filtering.

Inverter Control Logic

The Inverter Control Logic controls switching transistors Q201 and Q202. The heart of the inverter control logic is an oscillator, U352B, whose frequency is determined by C352, R354, and R355. Diode CR351 allows C352 to charge and discharge at different rates to set the oscillator duty cycle. This produces a 40 kHz pulse signal as shown in Fig. 4-26.

The 40 kHz signal from U352B is applied to NAND gate U351F. The other signal applied to U351F enables the gate, and comes from operational amplifier U353B. This amplifier senses the unregulated +12 V from mains frequency transformer T511 to determine whether the line voltage is sufficiently high enough to operate the 1980. When the output from U353B goes high, then U351F is enabled to pass the 40 kHz signal.

For A60A1 Inverter board version 670-6046-01, the 40 kHz signal from U352B is applied, via U351F, to comparator U343B. When the signal passes +5 V, the comparator switches, driving U342A (which is a set-reset flip-flop) and U342B (which is a divide-by-two flip-flop).

For A60A1 Inverter board version 670-6046-00, the 40 kHz signal from U352B is applied, via U351F, directly to the flip-flops.

The 20 kHz signal from U342B is applied to the NOR steering logic circuitry (U341A, B, and C) for turning on the control transistors, Q331 and Q321, which drive transformer T211 to switch the power switching transistors (Q202 and Q201).

When the oscillator's (U352B) output goes low, the NOR logic (U341A, B, and C) turns off Q331, Q321, and the two switching transistors (Q202 and Q201). At the same time Q322 is turned on and shorts the primary of transformer T211. Later, when the oscillator's output goes high, one of the two transistors (Q331 or Q321) driving T211's primary turns on and energizes one half of the primary. These two transistors are energized on alternate oscillator cycles by U342B.

The energizing of one half of T211's primary turns on its corresponding switching transistor (Q201 or Q202). When the oscillator's output goes low again, the switching transistor and the corresponding control transistor driving T211's primary winding turn off, and the primary is again shorted. The cycle is completed when the oscillator's output goes high again. This time the control transistor driving the transformer's opposite primary winding turns on, energizing the other half of T211. (The transistor that turns on is the one that was turned off during the previous oscillator cycle.)

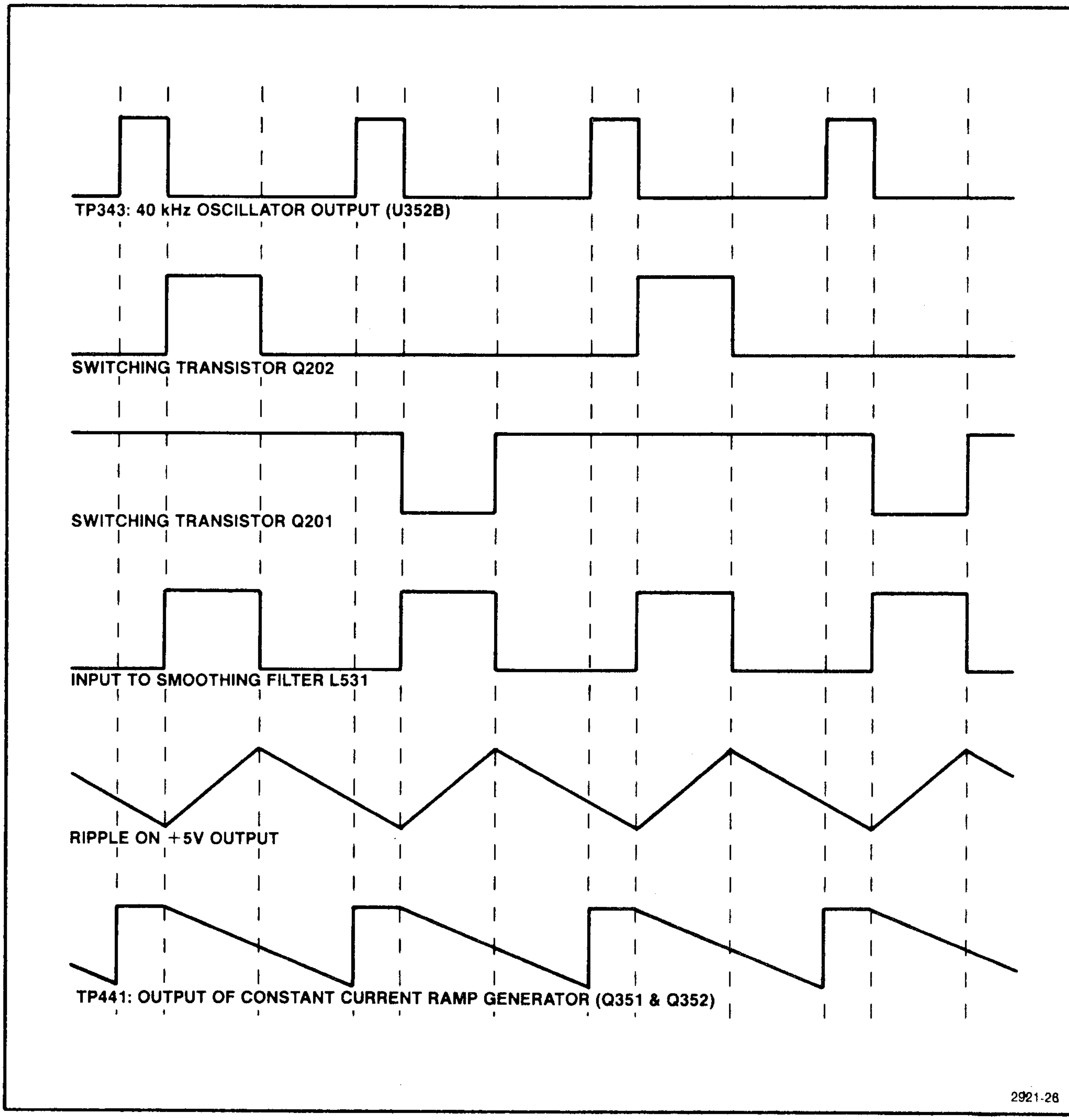


Fig. 4-26. Power Supply Waveforms.

The turn-off of the control transistor (either Q331 or Q321) and its associated switching transistor is also dependent upon the condition of the signals from the +5 V Regulator section (+5 V sense and current sense), the fault circuitry, and the +5 V reference. Two comparators, U552A and U551B, monitor the voltage on the +5 V regulated output at L531 (via R633) and the current drawn from the +5 V regulated supply through R1001. If either is excessive, the comparator's output will turn off the switching transistors through their respective control transistors. This is accomplished via inverter U351A and set-reset flip-flop U342A.

An intentional characteristic of the +5 V Regulator output is that it has a 40 kHz ripple. The comparison input to the comparators (U552A and U551B) rises and falls in step with the ripple frequency. A constant-current ramp generator, consisting of Q351, Q352, and C442, uses the inverted output from the 40 kHz oscillator, U352B, to generate a sawtooth ramp voltage. This ramp voltage (see Fig. 4-26) is added to and subtracted from the +5 V reference voltage at the inputs to the voltage-sensing and over-current comparators (U552A and U551B) to ensure that the +5 V output voltage and its ripple rise and fall in step with the oscillator.

If any of the output regulators (+12 V, -5.1 V, -15 V, +15 V, and +5 V) fail and the voltage changes appreciably, the Fault Sense circuitry will disable (through U351C) the switching transistors until the next fault oscillator pulse.

Comparator U552B senses the presence of the main +5 V output. This circuit detects wrong +5 V shunt-regulated supply voltages, and is in addition to the Fault Sense comparators on the A60A2 Regulator board. The comparator output is OR'ed with the Fault Sense signal from the A60A2 Regulator board. This information is applied to inverter U351D. The fault signal causes the output of U351D to go high. This enables the fault oscillator (U352A) which cycles on for approximately 100 ms and then off for a second.

The fault oscillator (U352A), through U351C, turns the switching transistors (Q202 and Q201) off for approximately one second, and then the oscillator permits the switching transistors to operate normally, allowing about 100 ms for the circuit to stabilize.

If the fault continues, the fault circuit will continue to permit the power supply to try and operate, but shuts the power supply down for approximately one second each time it detects a faulty output. If the fault signal ceases, U352A stops oscillating. Then, the 40 kHz oscillator (U352B) provides the main clock to drive the Inverter Control Logic circuitry. U352B turns on during the time that U352A is low.

The fault signal at the summing junction (pin 10 of U351D) is also applied to Q451. The signal at the emitter of Q451 immediately discharges C361, causing a reset signal to be generated by U353A. The

reset signal is applied via Q452 and J1-24 to A50 Main Interface board. The reset signal goes to the A10 CPU board and causes the CPU to reset the entire system in the 1980.

The front-panel POWER ON/STANDBY switch S100 provides a logic turn-on signal from the front panel of the 1980. When S100 is set to STANDBY, J1-1 input is ungrounded (goes high). This high shuts off both oscillators (U352A and U352B). When S100 is set initially set to ON, fault oscillator U352A turns on for one second under normal operating conditions, and then U352A goes low and the 40 kHz oscillator, U352B, turns on. Within the 100 ms that U352A is low and if all the supplies reach normal voltage output, U352A remains in the low state and U352B continues to oscillate.

If a false signal appears, U352A cycles on and off continuously, providing an output once every second (approximately). If the fault continues, the fault circuit will continue to permit the power supply to try and operate, but shuts it down once every second each time the fault circuit detects a faulty output.

Switching

The switching transistors (Q202 and Q201) function as current switches, directing current from the 300 V AC-to-DC section through T11's primary, first in one direction and then in the other. The switching transistors, which operate out of step from each other, are controlled by the Inverter Control Logic section as described earlier. A small amount of dc current is supplied, via J31-2, to the A62 Fan circuit board to operate the internal +28 V supply for the fan.

T11 has three secondary windings. One winding supplies power to the +5 V Regulator, the remaining two windings supply power to the Unregulated Supplies section.

+5 V Regulator

The +5 V Regulator consists of one T11 secondary winding (connections 3, 4, and 5), a full wave, center-tapped rectifier, followed by a smoothing filter composed of two series inductors and shunt capacitors. Fig. 4-25 shows a simplified drawing of this circuit. Yellow LED DS641, labeled OUTPUT, illuminates whenever there is sufficient power available from the +5 V Regulator supply. U541 and SCR Q1001 provide "crowbar" protection for the 1980 digital circuitry by shorting the +5 V Regulator supply to ground in the event excessive voltage occurs at its output.

A sample (+5 V sense) of the +5 V output voltage is sent to the Inverter Control Logic section to be compared with the +5 V reference for regulation purposes. A comparator (U551B) in the Inverter Control Logic circuit is connected across resistor R1001 on the ground line to

the center tap of the secondary winding of T11. This circuit is used to detect excessive current drawn from the +5 V supply.

Comparator U551A senses the current being delivered by the +5 V Regulator supply. If the current drops below 2 amps, U551A turns on Q441 to add R1002 as an internal load to maintain a stable output. Thus, the 1980 can operate with less than a full complement of boards (i.e. - at reduced load), and will not go out of regulation.

CAUTION

Do not remove circuit boards with instrument power on.

Once the load increases to draw 4 amps, U551A shuts off the internal load. Comparator U551A has a hysteresis of approximately 2 amps.

Unregulated Supplies

The unregulated supplies provide +28 V, -28 V, +17 V, -17 V, +14 V, and -7.5 V for the A60A2 Regulator board and for the power supply's own internal circuitry. The various taps on the T11 secondary windings feed full wave rectifiers and LC smoothing filters.

SERIES REGULATORS (Diagram 11B)

Series Regulators

The A60A2 Regulator board provides the +15 V, +12 V, -5.1 V, and -15 V supplies for the instrument. Also included are, +23 V, two +5 V, -5 V, and -23 V supplies used by the board. The regulated supplies on this board receive their power from the Unregulated Supplies on the A60A1 Inverter board.

The +28 V and -28 V supplies are regulated by 24 V zeners VR151 and VR153 to provide +23 V and -23 V internal power to the series-pass regulators (U121B, U131B, U141B, and U151B). Also, 5.6 V zeners VR112 and VR111 provide regulated +5 V and -5 V internal power to the same series regulators.

To obtain the +5 V REF voltage, which is used as a reference for each of the series-pass regulators, the +23 V supply is applied to a 5 V 1% zener, VR121. This zener determines the output voltage.

The +12 V, -5.1 V, -15 V, and +15 V Linear Regulators supply the required voltages via the Main Interface board to the plug-in circuit cards used in the 1980 system.

Basically, each of the four series-pass regulators are the same, only the component values are different. U121B, U131B, U141B, and U151B perform as series-pass voltage regulators, comparing the sense voltage (a sample of the output) with a multiple of the +5 V REF voltage.

Operational amplifier integrated circuits U121A, U131A, U141A, and U151A act as fold-back limiters. They sense the voltage across the 0.1 ohm current-sensing resistors (R223, R233, R244, and R253). If the current drawn exceeds the capacity of the individual supply, the fold-back limiter for the supply detects the overload and "folds the current back." This means that as the voltage across the current-sensing resistor increases, or the output voltage decreases, the available current through the series-pass transistors (Q22, Q31, Q42, or Q51) is reduced.

The +12 V and -5.1 V supplies have SCR "crowbar" circuits to short the output and shut down the series-pass transistors. Using the +12 V regulator circuit as an example, C134 is a time-delay capacitor that determines how long an over-voltage condition should exist before the crowbar trips. A divider (R224 and R225) gives a voltage that is compared to an internal reference. Pin 8 of U122 provides the trigger to the SCR (Q23) that does the switching.

The +28 V and -28 V supplies are regulated by 24 V zeners VR151 and VR153 to provide +23 V and -23 V internal power to integrated circuits (U121, U131, U141, and U151). Also, 5.6 V zeners VR112 and VR111 provide regulated +5 V and -5 V internal power to the same integrated circuits.

To obtain the +5 V(1) reference that is used as a reference for each of the series-pass regulators, the +23 V supply is applied to a 5 V 1% zener VR121. This zener determines the output voltage.

Fault Sense

The Fault Sense circuit detects failures in any of the four series-regulated power supply outputs (+12 V, -5.1 V, -15 V, and +15 V). Three dual-comparators (U111, U112, and U211) are used to sense for over voltage and under voltage. If one of the supplies is faulty, the Fault Sense line enables the fault oscillator in the Inverter Control circuitry on the A60A1 Inverter board.

Fan Regulator

The Fan Regulator board, A60A3, supplies power to the cooling fan (B1001). This allows the fan to operate properly regardless of the line (mains) input voltage or frequency, as long as the specifications of the instrument are met.

The cooling fan power supply provides a pulse-width modulated square wave. The Fan Regulator board obtains its power from the AC-to-DC section and the switching transistors (Q202 and Q201) of the A60A1 Inverter board.

A pair of switching transistors (Q411 and Q311) alternately switch +150 Vdc and -150 Vdc to the cooling fan at 60 Hz rate. The resulting fan motor signal, which is a square wave, has an ac effective (rms) value of approximately 110 V.

The Fan Regulator board circuit components obtain their power by CR321 half wave rectifying the 20 kHz signal from the switching transistors on the A60A1 Inverter board. The resulting dc voltage is then filtered. Two zener diodes, VR11 and VR12, provide the +28 V circuit power and +10 V. The +10 V source is used as a reference to preset an R-S flip-flop U211B whenever the voltage on pin 5 of U211B is less than +10 V.

Upon initial power-up, a 60 Hz oscillator (U211A) starts generating a square wave to one end of the primary of transformer T221. At the same time, U211D, an exclusive-NOR (when combined with CR101, CR102, and associated circuitry), is allowed to be low at its output. Therefore, at the instant that the 60 Hz oscillator generates a high, the primary of T221 conducts. This causes one of the two switching transistors (Q311, Q411) to turn on and the secondary winding to turn on. As a result, either +150 Vdc or -150 Vdc is switched on and applied to the fan, B1001.

During the time that the voltage is applied to the fan motor, C212 starts charging to the fan motor voltage. When C212 charges to approximately +10 V or -10 V, precision rectifier circuit U211C produces a positive pulse. This pulse causes the R-S flip-flop (U211B) to reverse (set) and its output is high. The high at the output of U211B causes T221 primary to stop conducting and turns off the switching transistor. This condition shuts off the current to the fan motor.

When the oscillator (U211A) reverses its output (becomes low), current again flows in the primary of transformer T221, however, in the opposite direction to that described for the previous cycle. The opposite switching transistor (Q311 or Q411) turns on and causes the opposite power source (+150 V or -150 V) to be applied to the fan motor and capacitor C212.

The oscillator's changing state also resets the R-S flip-flop (U211B). The charging of the capacitor to either approximately +10 V or -10 V causes the precision rectifier U211C to produce another positive pulse and the whole process is repeated. Note that the oscillator resets the R-S flip-flop (U211B) with each state change (low or high).

The following is a detailed description of U211D, CR101, CR102, and associated circuitry. Without CR101 conducting, divider R212 and R105 sets pin 12 of U211D at +14 V. The other divider (R106 and R213) sets pin 13 of U211D at approximately +19 V. When pin 7 of U211B and pin 1 of U211A go low, CR102 conducts, causing pin 13 of U211D to go below +14 V. Since pin 13 is the negative input, pin 14 of U211D goes high.

When pin 7 of U211B and pin 1 of U211A go high, CR101 conducts. The voltage at pin 12 of U211D increases to approximately +19 V and CR102 is reverse biased. Pin 12 voltage is now positive, with respect to the pin 13 voltage, and causes pin 14 of U211D to remain high.

When pin 7 of U211B goes low and pin 1 of U211A goes high or these conditions are reversed, both CR101 and CR102 conduct. The voltage at pin 13 of U211D will be 1.2 V positive with respect to pin 12 and the output (pin 14) will be low.

CHECKS AND ADJUSTMENTS

The checks and adjustments for this product are extensive. Because of their size, they have been placed in a separate volume, titled 1980 Service Manual, Vol. 2 - Diagnostics and Calibration. That volume is included as part of the 1980 Service Kit. Part numbers are listed as optional accessories in the Accessories list of this manual.

MAINTENANCE

Introduction

The maintenance information describes the procedure for reducing or preventing instrument malfunction, plus troubleshooting and corrective maintenance. Preventive maintenance improves instrument reliability. Should the instrument fail to function properly, corrective measures should be taken immediately; otherwise, additional problems may develop within the instrument.

PREVENTIVE MAINTENANCE

Preventive maintenance consists of cleaning, visual inspection, performance check, and readjustment (if needed). The preventive maintenance schedule that is established for the instrument should be based on the environment in which the instrument is operated and the amount of use. Under average conditions a preventive maintenance check should be performed every 3000 hours of instrument operation.

Cleaning

Clean the instrument often enough to prevent dust or dirt from accumulating in or on it. Dirt acts as a thermal insulating blanket and prevents efficient heat dissipation. It also provides high resistance electrical leakage paths between conductors or components in a humid environment.

Exterior. Clean the dust from the outside of the instrument by wiping or brushing the surface with a soft cloth or small brush. The brush will remove dust from around the front-panel switches and push buttons. Hardened dirt may be removed with a cloth dampened in water that contains a mild detergent. Abrasive cleaners should not be used.

Interior. Clean the interior by loosening accumulated dust with a dry soft brush, then remove the loosened dirt with low pressure air to blow the dust clear. (High velocity air can damage some components.) Hardened dirt or grease may be removed with a cotton-tipped applicator dampened with a solution of mild detergent in water. Abrasive cleaners should not be used. If the circuit board assemblies need cleaning, remove the circuit board by referring to the instructions under Corrective Maintenance in this section.

After cleaning, allow the interior to thoroughly dry before applying power to the instrument.

CAUTION

Do not allow water to get inside any enclosed assembly or components. Do not clean any plastic materials with organic cleaning solvents such as benzene, toluene, xylene, acetone, or similar compounds because they may damage the plastic.

Visual Inspection

After cleaning, carefully check the instrument for such defects as defective connections, damaged parts, and improperly seated transistors and integrated circuits. The remedy for most visible defects is obvious; however, if heat-damaged parts are discovered, try to determine the cause of overheating before the damaged part is replaced; otherwise the damage may be repeated.

Transistor and Integrated Circuit Checks

Periodic checks of the transistors and integrated circuits are not recommended. The best measure of performance is the actual operation of the component in the circuit. Performance of these components is thoroughly checked during the performance check or adjustment procedures, and any substandard transistors or integrated circuits will usually be detected at that time.

Static-Sensitive Components

CAUTION

Static discharge can damage any semiconductor component in this instrument.

This instrument contains electrical components that are susceptible to damage from static discharge. See Table 6-1 for relative susceptibility of various classes of semiconductors. Static voltages of 1 kV to 30 kV are common in unprotected environments.

Observe the following precautions to avoid damage:

1. Minimize handling of static-sensitive components.

2. Transport and store static-sensitive components or assemblies in their original containers, on a metal rail, or on conductive foam. Label any package that contains static-sensitive assemblies or components.

3. Discharge the static voltage from your body by wearing a wrist strap while handling these components. Servicing static-sensitive assemblies or components should be performed only at a static-free work station by qualified personnel.

4. Nothing capable of generating or holding a static charge should be allowed on the work station surface.

5. Keep the component leads shorted together whenever possible.

6. Pick up components by the body, never by the leads.

7. Do not slide the components over any surface.

8. Avoid handling components in areas that have a floor or work-surface covering capable of generating a static charge.

9. Use a soldering iron that is connected to earth ground.

10. Use only special antistatic suction-type or wick-type desoldering tools.

TABLE 6-1

Relative Susceptibility to Static Discharge Damage

Semiconductor Classes	**Relative Susceptibility Levels [a]**
MOS or CMOS microcircuits or discretes, or linear microcircuits with MOS inputs (Most Sensitive)	1
ECL	2
Schottky signal diodes	3
Schottky TTL	4
High-frequency bipolar transistors	5
JFETS	6
Linear microcircuits	7
Low-power Schottky TTL	8
TTL (Least Sensitive)	9

[a] Voltage equivalent for levels:

1 = 100 to 500 V
2 = 200 to 500 V
3 = 250 V
4 = 500 V
5 = 400 to 600 V
6 = 600 to 800 V
7 = 400 to 1000 V (est.)
8 = 900 V
9 = 1200 V

(Voltage discharged from a 100 pF capacitor through a resistance of 100 ohms.)

TROUBLESHOOTING

Introduction

The following information may assist in locating the source of a problem. Also, the 1980 Service Manual Vol. 2, Diagnostics and Calibration, contains detailed information about troubleshooting the 1980. That manual includes information about the following:

Using the power-up diagnostics (self-tests) built into the 1980.

Using the Diagnostics board included with the 1980 Service Kit.

Using Signature Analysis to troubleshoot the 1980.

Adjusting and troubleshooting the VDC assembly (A24) using the VDC Calibration ROM board included with the 1980 Service Kit.

About troubleshooting the CPU (A10) using the CPU Test ROMs included with the 1980 Service Kit.

After a faulty assembly is found, refer to the Corrective Maintenance information, in this manual, for removal and replacement instructions.

NOTE

No repair should be attempted during the warranty period or by unqualified personnel.

Troubleshooting Aids

Foldout Pages. The foldout pages at the back of the manual contain significant information useful in troubleshooting the instrument. Block and schematic diagrams, circuit board illustrations, and parts locating charts are found in the foldout pages.

Block and schematic diagrams are the most often used aids to component-level troubleshooting. The circuit number and electrical value of each component is shown on the diagrams. See the first page in the Diagrams section for definition of the reference symbology used to identify components in each circuit. Refer to the Replaceable

Electrical Parts List for a description of each component. Those portions of the circuit that are mounted on circuit boards or assemblies are enclosed in a border, with the name and assembly number on the border.

NOTE

Check the Change Information section at the rear of the manual for inserts describing corrections and modifications to the instrument and manual.

Electrical components, connectors, and test points are identified on circuit board illustrations located on the inside fold of the corresponding circuit diagram, or the back of the preceding diagram.

The schematic diagrams and the circuit board illustrations are assigned location grids. A parts locating chart for each assembly gives grid locations of components on both the circuit board and the schematic.

Assembly Numbering. The circuit boards and other assemblies are assigned assembly numbers. Fig. 6-1 and Fig. 6-2 show the locations of the assemblies, and their assembly numbers.

The Replaceable Electrical Parts List is arranged in assembly number order, as designated by ANSI Standard Y32.16-1975. The circuit number in the parts list is made up by combining the assembly number and the circuit number.

EXAMPLE: R540 on A22 would be listed in the parts list as A22R540.

EXAMPLE: U202 on subassembly A24A1A4 would be listed in the parts list as A24A1A4U202.

In the case of chassis, and front- and rear-panel mounted components, which have no assembly number, the parts list number is the same as shown on the schematic.

NOTE

Use the parts list number (e.g. - A22R540) when ordering replacement parts.

General Troubleshooting Technique

The following procedure is recommended to isolate a problem, and expedite repairs.

1. Ensure that the malfunction exists in the instrument. Check the operation of associated equipment, and the operating procedure of the instrument (see the Operating Instruction section of the 1980 Operator's Manual).

2. Determine and evaluate all symptoms of trouble. Use the 1980 self-tests to try to isolate the problem to an assembly.

3. Replace the faulty assembly, or arrange for service by Tektronix. See Corrective Maintenance for information on assembly replacement, Tektronix service, and ordering replacement assemblies and mechanical parts.

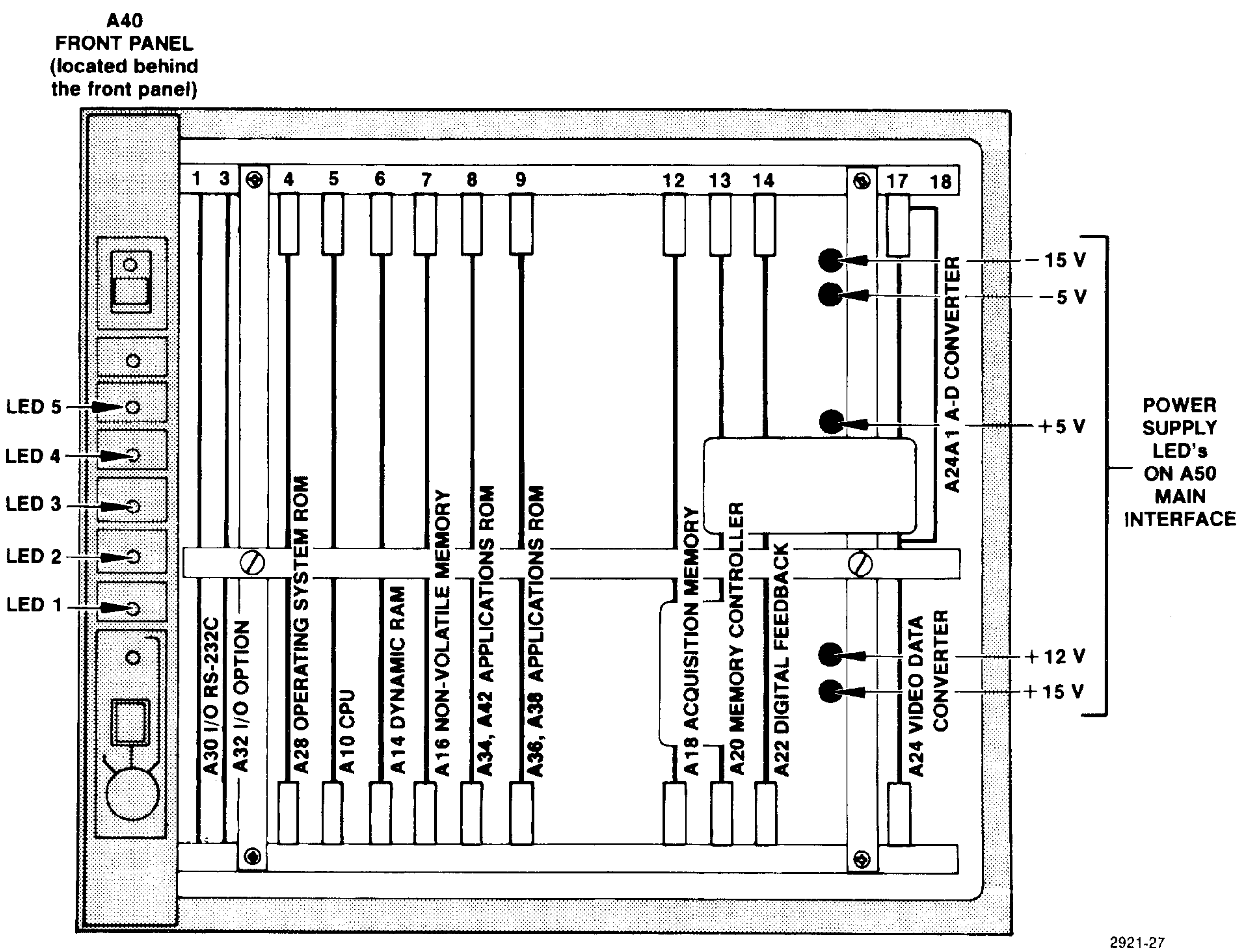


Fig. 6-1. 1980 Assembly Locations and Self-Test Lights (Front-View).

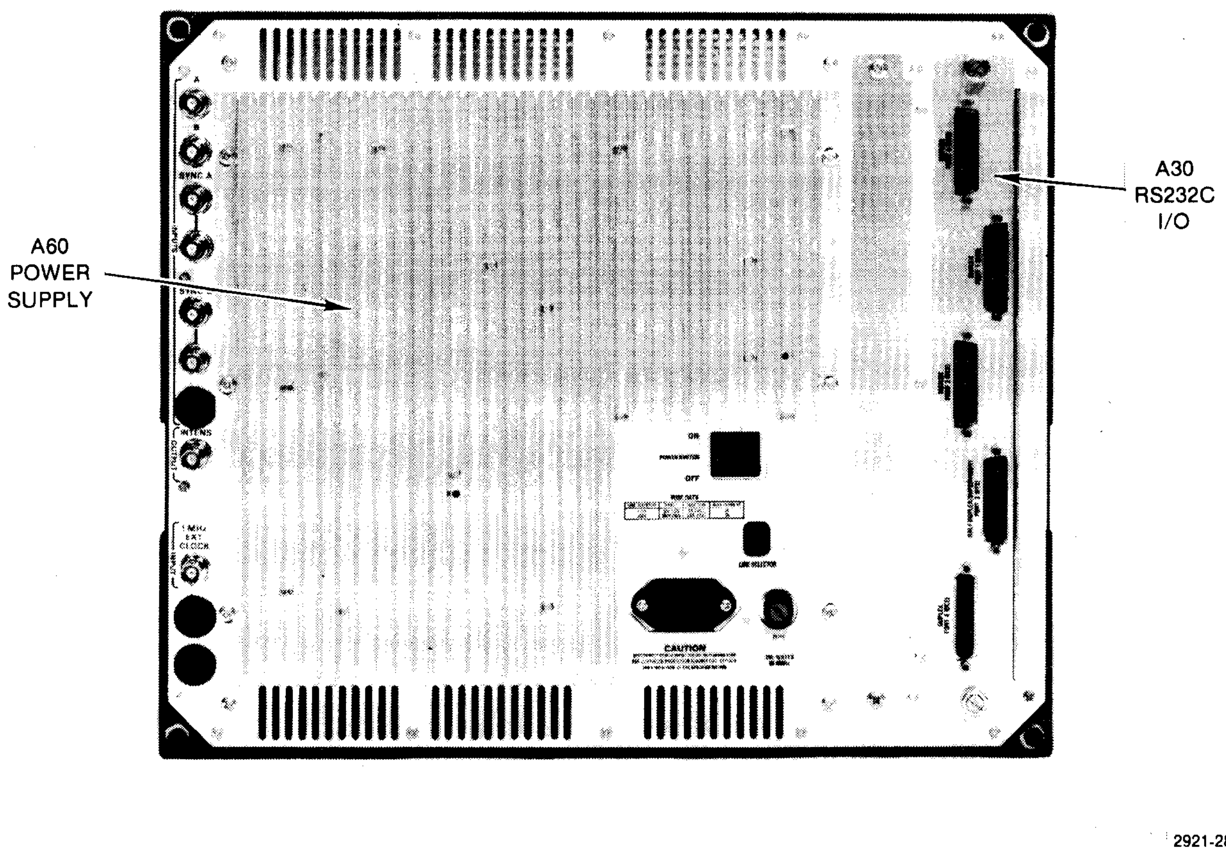


Fig. 6-2. 1980 Assembly Locations (Rear-View).

Power Supply Repair Parts

When troubleshooting the Inverter board (A60A1), touching the probe tip to pin 5 of U352B or an accidental short may cause the switching transistors Q201 and/or Q202 to fail. This failure, in turn, may cause C211 and C212 to fail or become damaged. Failure of the switching transistors may also cause the logic transistors Q331 and/or Q321 and, in some cases, Q322 to fail. since failure of these components can cause F1001 to blow, an ohmmeter must be used to check if the switching transistors have failed. If they have failed, the switching transistors (Q201, Q202), C211, C212, Q331, and Q321 must all be replaced and the old parts discarded.

NOTE

All of these components can be replaced without removing the Inverter board.

To repair the power supply quickly, the service technician should have the following repair items:

Inverter Board (A60A1) Repair Parts - Extra fuses (F1001), Q201, C202, C211, C212, Q331, Q321, and Q322.

Fan Board (A60A3) Repair Parts - Q311 and Q411.

After completing the repairs, use the "Powering-Up After Completing Repairs" procedure to determine if further troubleshooting is necessary.

Circuit-Tracing the Fault Oscillator and Logic Circuits

This procedure enables the oscillator and logic circuits to be checked without applying ac power to the power supply assembly.

Equipment Required: A dc power supply that has a nominal output voltage between +22 V to +30 V, and a test oscilloscope.

Procedure:

1. Disconnect the power cord from the 1980 mainframe. Set the POWER ON/STANDBY switch to STANDBY.

2. Connect the +22 V to +30 Vdc power supply between TP531 and ground. Check that the 1980 is connected via the 24-pin connector P1 to the power supply.

3. Check that the red POWER light, DS642 on the Inverter board (A60A1), is illuminated.

4. Set the POWER ON/STANDBY switch to POWER ON.

5. Using internal triggering, connect the oscilloscope vertical input probe to TP451 to check that the Fault Oscillator, U352A, is operating (generating pulses).

6. Check that the logic circuits are operating properly by connecting the test oscilloscope vertical input probe to the cathode of CR221 and then to the cathode of CR222. Instead of using these test points, you may prefer to connect the probe tip to the mounting tab (collector) of Q321 and then Q331. The collectors of these power transistors are electrically connected to their respective diodes. Use care so that an inadvertent pull on the probe does not pull Q321 or Q331 out of its socket.

7. (Optional). If further circuit tracing is necessary, check the waveforms at the following test points:

TP321 TP322 TP323 TP343	Positive-going 12 volt pulses.
TP342	Negative-going 12 volt pulses.
TP221	Negative-going 4 volt pulses.
TP441	Negative-going 5 volt pulses.

Powering-up After Completing Repairs. Connect the power supply cord to an autotransformer. Check that the autotransformer dial is set to 0. Check that the power supply 24-pin output connector, P1, is connected to the 1980 mainframe which serves as the load.

Set the POWER ON/STANDBY switch to STANDBY. Increase the autotransformer output voltage slowly toward 90 Vac. At approximately 35 Vac and up, check that the red POWER light, DS642 on A60A1, is glowing. At 60 Vac and higher, watch for the neon bulb, DS311 on A60A1, to flicker. The neon bulb indicates that capacitors C421 and

C521 on A60A1 have charged up, and power is being applied to the switching transistors. If the neon does not flash, and the POWER light does not glow, then further troubleshooting with an ohmmeter is necessary. If the neon flickers, and the red POWER light glows, return the autotransformer dial to 0. Set the POWER ON/STANDBY switch to POWER ON.

Increase the autotransformer output voltage slowly toward 90 Vac. The red POWER light and neon bulb, DS311, should be providing the same indications as described previously. In addition, the yellow OUTPUT light, DS641 on A60A1, should light when the autotransformer output voltage reaches approximately 80 Vac. If all the lights are providing normal indications, then it is safe to set the autotransformer for an output voltage of 115 Vac.

Miscellaneous Information. If one of the power supply output voltages is out of tolerance or shorted to ground, the yellow OUTPUT light, DS641, will blink on and off.

Shorting TP451 on A60A1 to ground is a good method of defeating all of the fault circuitry.

The +5 V supply load affects all the other supplies.

NVM (A16) Battery Description and Servicing (See Fig. 6-3)

Two internal battery packs (BT190 and BT590) power the CMOS memory and the real-time clock circuits of the A16 Non-Volatile Memory board when power is not supplied to the unit. The batteries allow the memories and clock to retain their capabilities for at least three weeks with no other power.

When the rear-panel POWER ON/STANDBY switch, S100, is set to ON, the batteries receive the normal charging rate from the A16 NVM board.

When the POWER ON/STANDBY switch is set to STANDBY, the battery packs receive current directly from the power supply unit. This keeps the batteries from discharging when the 1980 is not operating, but power is available. During a power interruption, the batteries will discharge while supplying power to the circuits. Therefore, when power is again available, the 1980 should be operated for at least forty-eight hours with the POWER ON/STANDBY switch set to POWER ON.

NOTE

If the 1980 is allowed to stand idle for up to three weeks in the STANDBY mode, the instrument should be set to the POWER ON mode for forty-eight hours to assure adequate battery charge.

If the battery pack becomes defective, the entire pack must be replaced. The rubber tiedowns should be replaced when replacing the battery pack. When ordering replacements, refer to the Electrical and Mechanical Replaceable Parts sections of this service manual to find the part numbers and descriptions.

Checking the Battery Pack. If the BATTERY FAIL light on the front panel, or DS060 on A16 illuminates, one or both of the battery packs are weak and must be recharged or replaced. If the light does not go out after a suitable recharge time, or does not hold a charge, use a voltmeter to find which battery is defective, then replace that battery pack.

Replacing the Battery Pack. Unsolder and remove the bottom shield over the positive end of the battery pack. Unsolder the terminals of the defective battery pack. Clip the rubber tiedowns. Remove the battery and tiedowns.

Install the replacement battery pack. Make sure the battery polarity is correct (the battery pack cover extends only over the positive end. Replace and resolder the shield on the bottom side of the board.

Install new rubber tiedowns. The tiedowns have tapered ends so they can be threaded through the holes. Long-nose pliers can be used to pull the ends of the tiedowns through the holes until sufficient tension is obtained to securely hold down the battery.

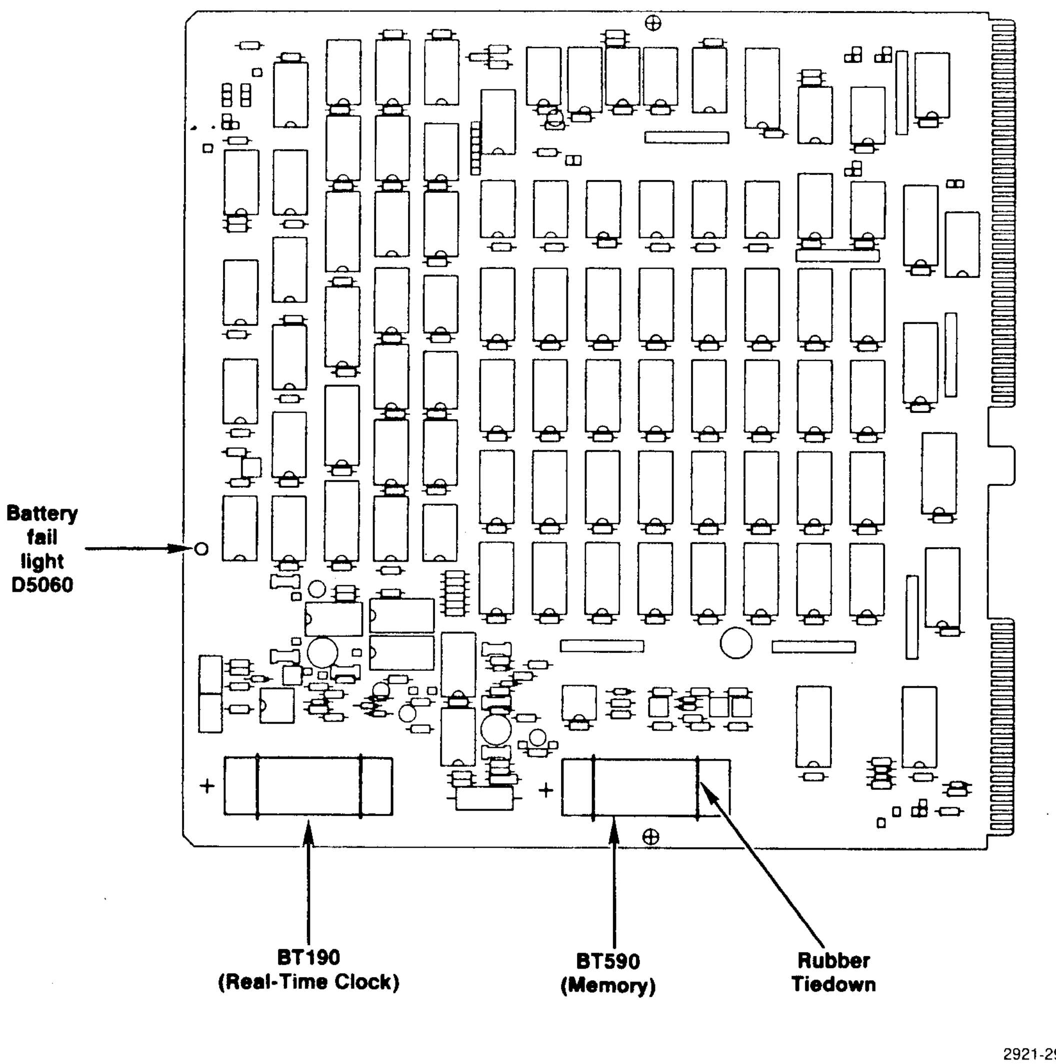


Fig. 6-3. NVM (A16) Battery Locations.

CORRECTIVE MAINTENANCE

Corrective maintenance consists of assembly replacement and instrument repair. Special techniques and procedures required to replace assemblies in this instrument are described here. If it is necessary to ship your instrument or an assembly to a Tektronix Service Center for repair or service, refer to the repackaging instructions at the end of this section.

Obtaining Replacement Parts

Replacement parts are available from or through your local Tektronix Field Office or representative.

When ordering replacement parts from Tektronix, Inc. include the following information:

1. Tektronix part number

2. Description of the part (if an assembly, include the assembly number).

3. Serial Number

4. Any option and modification numbers

Check the Replaceable Electrical and Mechanical Parts Lists for the Tektronix part numbers and descriptions.

Tektronix Service for the 1980

For in-warranty service, contact the nearest Tektronix Service Center designated to repair the 1980.

For out-of-warranty service when a fault has not been isolated to a particular assembly, contact the nearest designated Tektronix Service Center to arrange a service call. The charge for a service call includes travel time, labor time, and price of materials. Fast response service calls may be arranged for minimum down time.

For out-of-warranty service if a faulty assembly is identified, the faulty assembly may be sent to Tektronix for repair. To arrange for assembly repair, either contact a local Tektronix Service Center, or contact the Tektronix Repair and Return Center. The current repair price will be charged.

The following Tektronix Service Centers are currently designated to service the 1980:

IRVINE

17052 Jamboree Blvd.
Irvine, California 92714
Phone: (714)556-8080 or
(213)778-5225

DALLAS

P.O. Box 344529
Dallas, Texas 75234
Phone: (214)233-7791

CHICAGO

5350 Keystone Ct.
Rolling Meadows, Illinois 60008
Phone: (312)259-7580

ORLANDO

3657 Maquire Blvd.
Suite 100
Orlando, Florida 32803
Phone: (305)894-3911 or 636-343 (Cape Kennedy area)

PHILADELPHIA

1720 Walton Road
Blue Bell, Pennsylvania 19422
Phone: (215)825-6400 or
From Harrisburg, Lancaster, and
York area: ENterprise 1-0631

LONG ISLAND

100 Crossways Park West
Woodbury, L.I., New York 11797
Phone: (516)364-9060 or (212)895-9215 (from NYC)

The address for the Tektronix Repair and Return Center is:

Tektronix, Inc.
Attention: Repair and Return Center
Del. Sta. 56-095
P. O. Box 500
Beaverton, Oregon 97007
Phone: (503)642-8933

Removing the Front-Panel Door

Most of the assemblies are accessible by removing the front-panel door. To remove the door, use the following procedure:

1. Unlock the door.

2. Pull the top of the door away from the frame, using the key.

3. Firmly hold an accessible edge of the door while pushing down on the inside door release spring.

4. Carefully lift the door away from the frame.

NOTE

A map of the pullout assemblies is located on the inside of the door.

To replace the door, use the following procedure:

1. Place the bottom of the door on the bottom of the opening in the frame.

2. Push the top of the door towards the top of the opening in the frame.

3. Push down on the release spring, and position the door to be flush with the frame.

4. Hold the door firmly in position and lock it.

Removing the Cabinet Covers

The top, bottom, and side covers are held in place with quarter-turn fasteners. The side covers are also held by four screws, one in each corner. Remove any screws from the cover, then use a coin or wide-blade screwdriver to turn each quarter-turn fastener counterclockwise. Remove the cover.

To replace a cover, first insert the front end of the cover into the frame at the front of the instrument. Then position the cover against the frame, and turn the quarter-turn fasteners clockwise. Replace the corner screws in the side covers.

Replacing Pullout Assemblies

To remove pullout assemblies, refer to Fig. 6-4, and use the following procedure:

1. Loosen the two thumbscrews on the circuit board retainer. Then, swing the retainer down to its resting position.

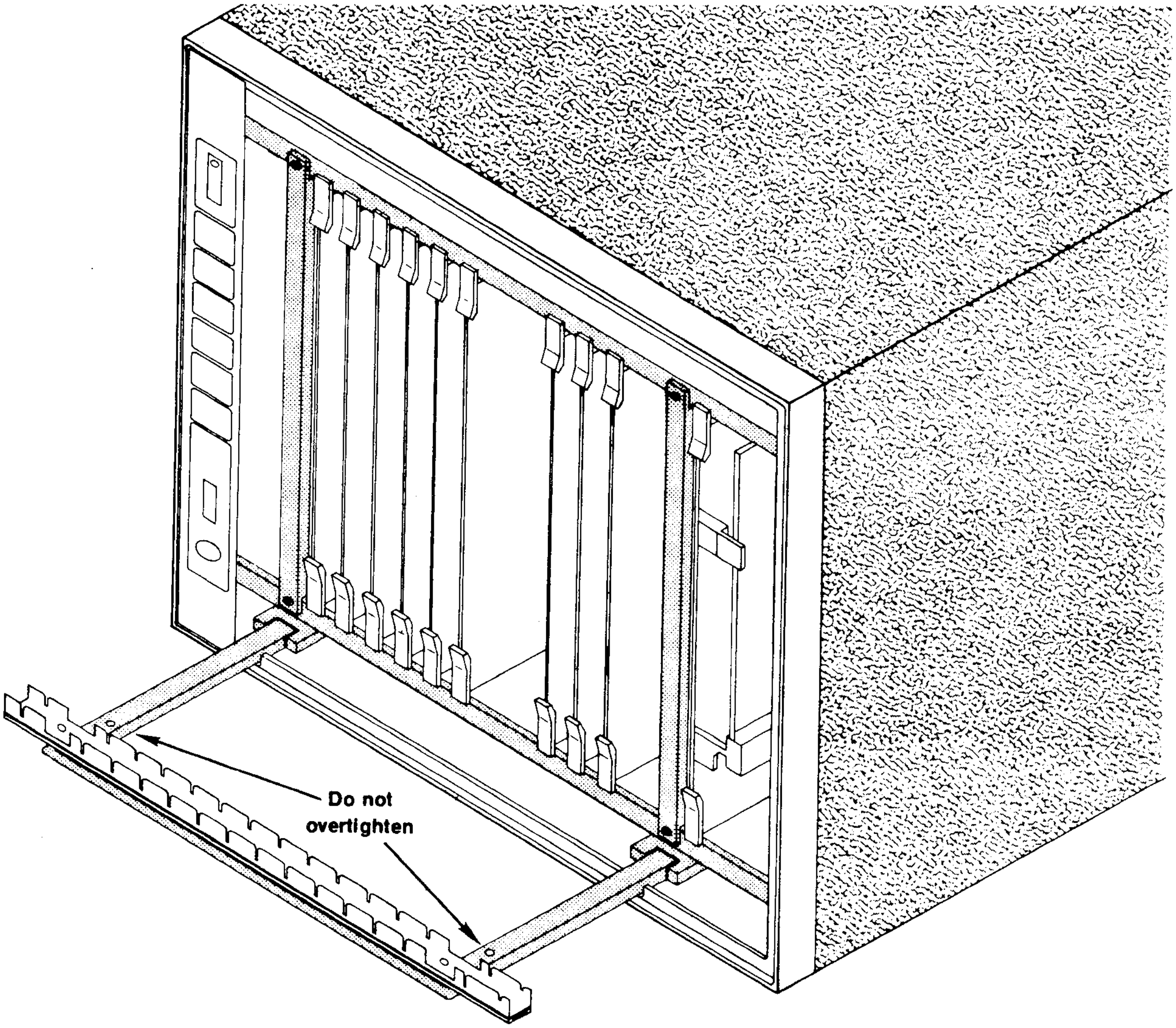
2. If the assembly has connectors on the outer edge (A18, A20, and A24), lift the connector locking ears, and pull the ribbon cable connector from the board connector.

3. Lift the ears on the board corners to pull the assembly from the inside board edge connector. Then, carefully pull the board out of the frame.

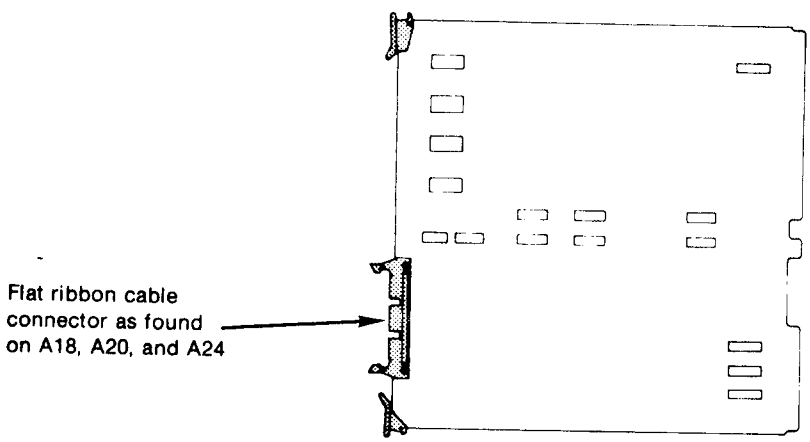
To replace a pullout assembly, reverse the procedure.

CAUTION

Be sure that the assembly is firmly seated in the edge connector. Also, tighten the circuit board retainer thumbscrews only finger tight.



a. Circuit board retainer.



b. Pullout assembly removal details.

2921-30

Fig. 6-4. Replacing Pullout Assemblies.

Replacing the RS-232C I/O Assembly (A30)

To remove the assembly, use the following procedure:

1. Remove any RS-232C connectors attached to the assembly.

2. Loosen the two thumbscrews.

3. Pull the assembly out of the back of the frame.

To replace, reverse the procedure.

Replacing the Front-Panel Assembly (A40)

To remove the Front-Panel Assembly (A40), refer to Fig. 6-5, and use the following procedure:

1. Remove the side cover adjacent to the front-panel switches and lights (left side).

2. Unplug the four multi-pin connectors attached to the assembly.

3. Remove the three screws that hold the assembly to the front panel, and remove the assembly.

To replace, reverse the procedure.

Replacing the Power Supply Assembly (A60)

To replace the Power Supply Assembly (A60), refer to Fig. 6-6, and use the following procedure:

1. Turn the 1980 on its side, with the bottom cover facing you.

2. Remove the bottom cover.

3. Inside the 1980, unplug the connectors from the Power Supply Assembly (A60).

4. On the rear of the instrument, remove the six screws holding the assembly, and remove the assembly.

To replace, reverse the procedure.

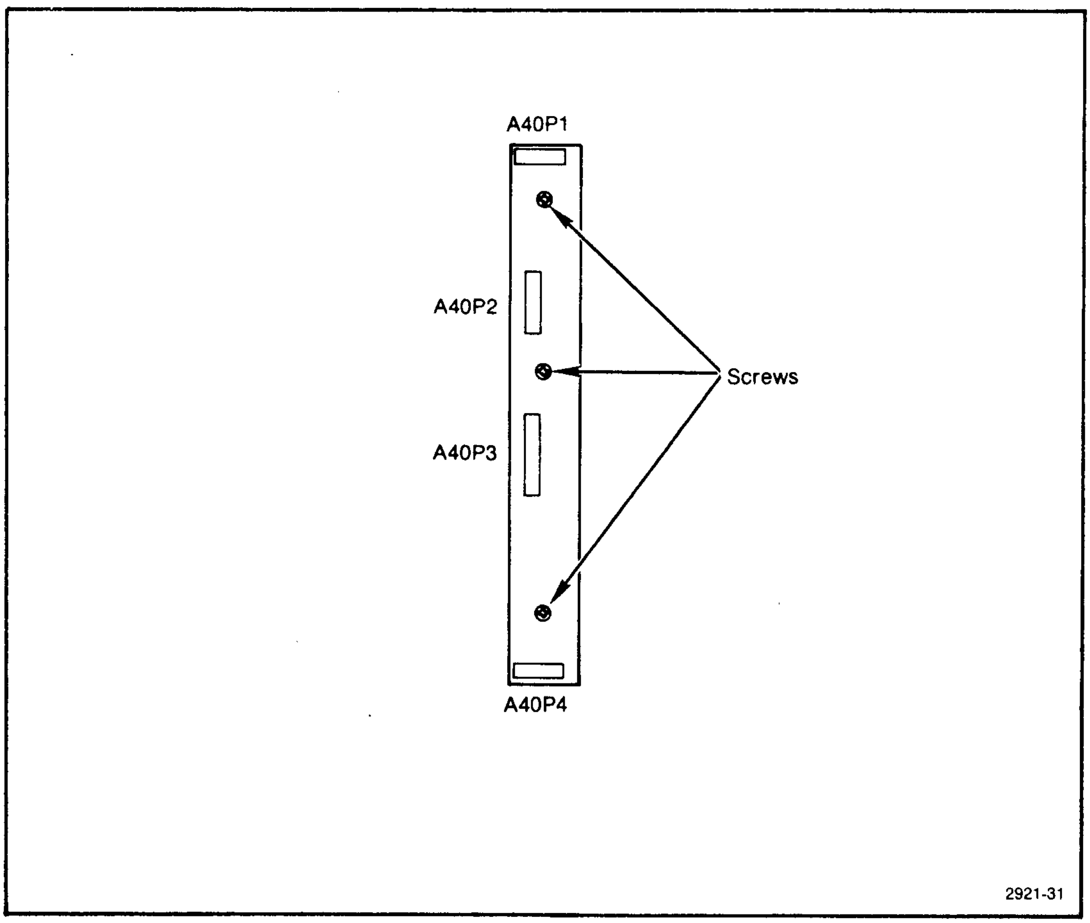
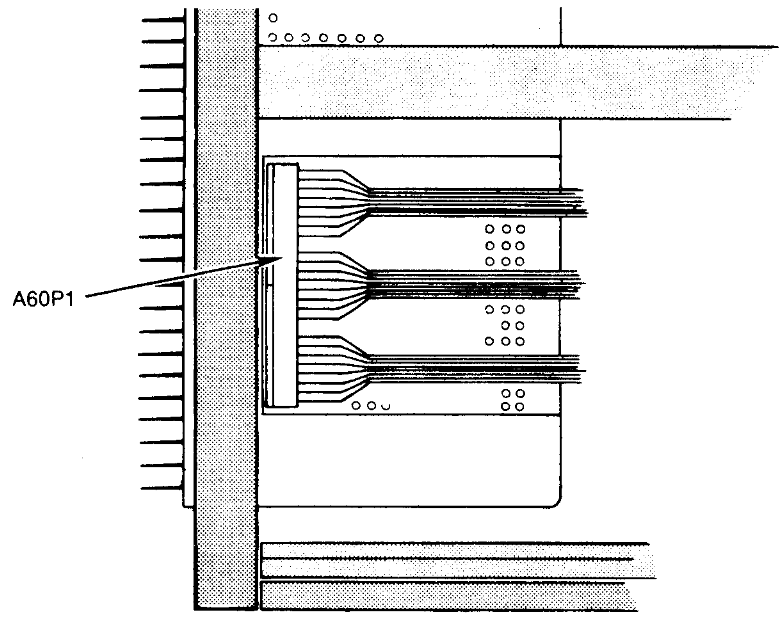
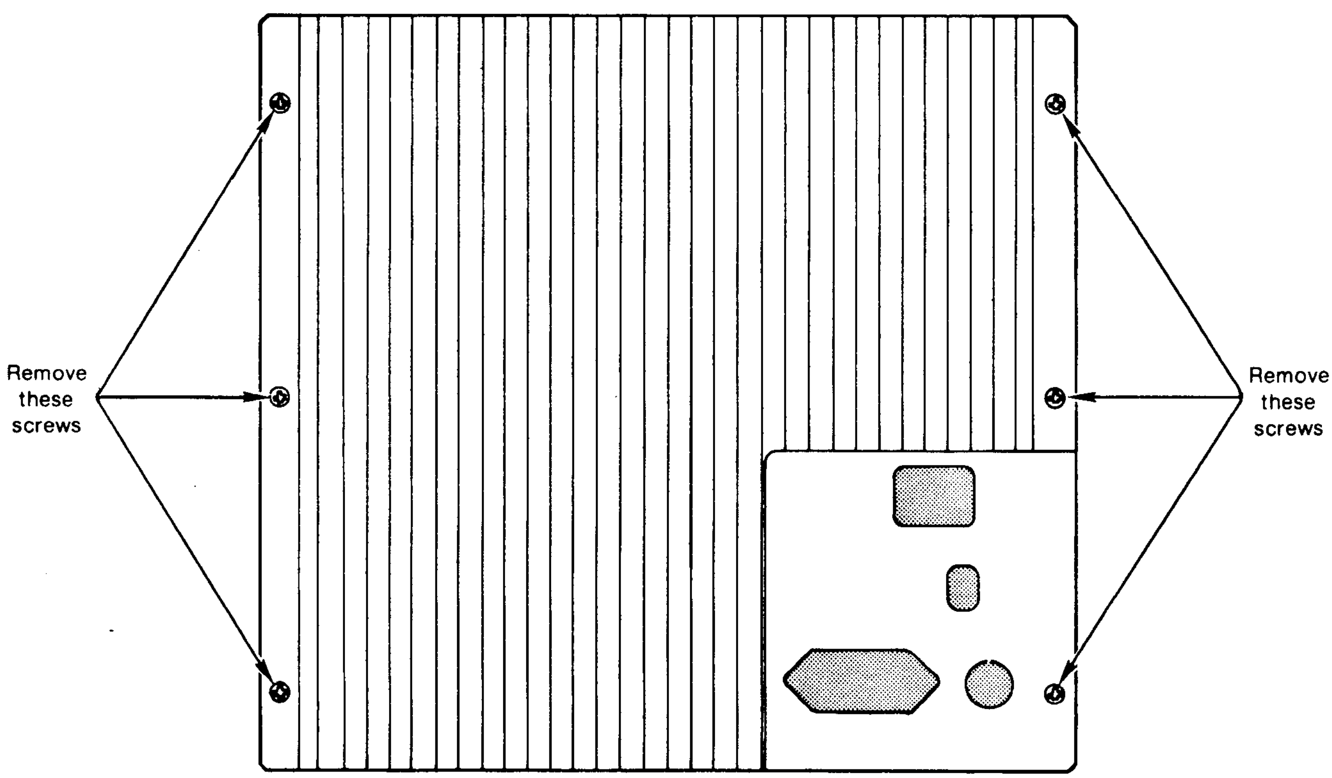


Fig. 6-5. Replacing the Front-Panel Assembly (A40).



a. 1980 bottom view, with cover removed to expose the power supply cable, A60P1.



b. Power Supply holding screws.

2921-32

Fig. 6-6. Replacing the Power Supply (A60).

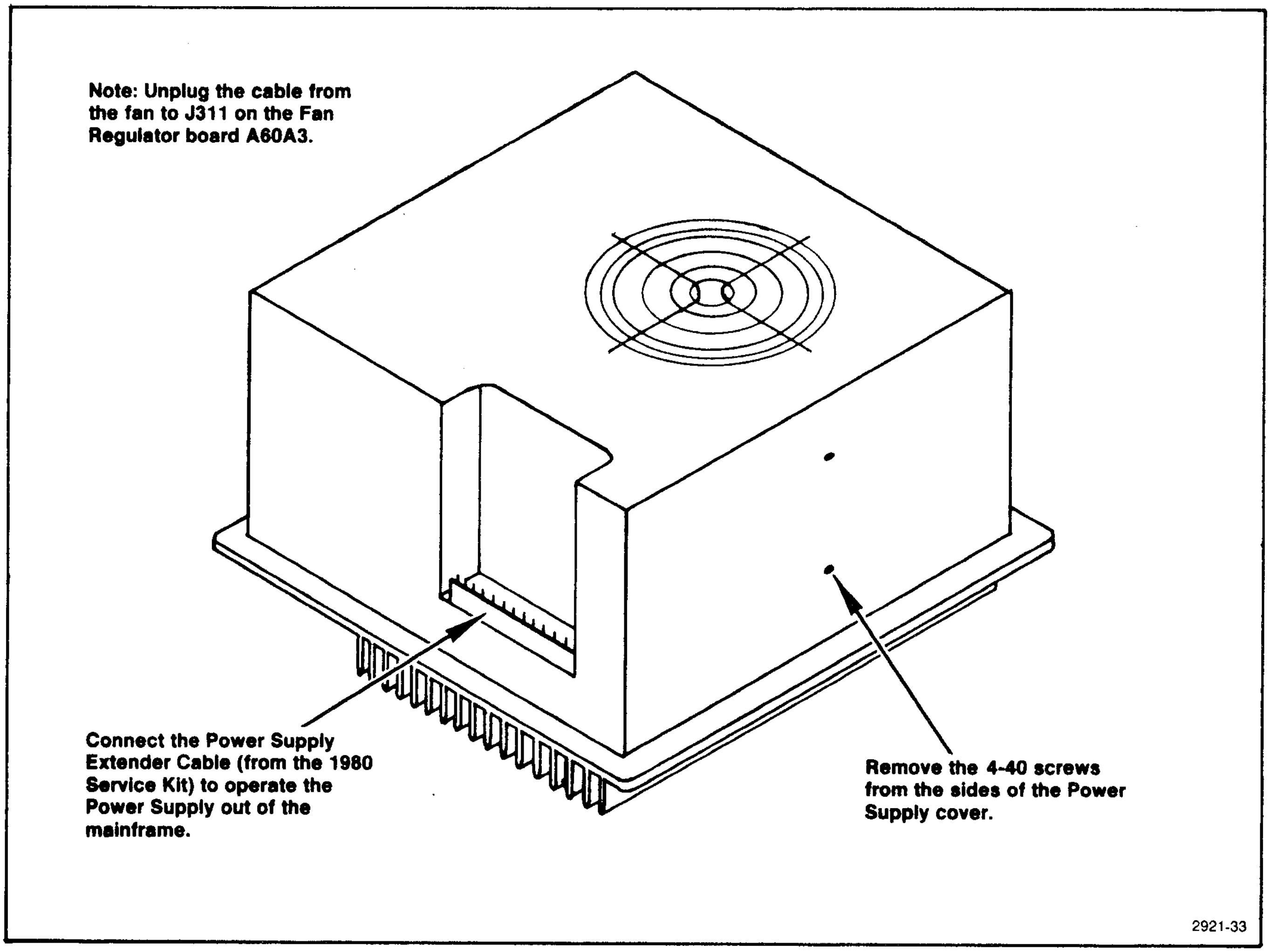


Fig. 6-7. Removing the Power Supply Cover and Fan.

SERVICING THE POWER SUPPLY ASSEMBLY

After removing the assembly from the mainframe (refer to Fig. 6-6), remove the cover and fan assembly (see Fig. 6-7) to obtain access to the circuit boards.

WARNING

Electrical shock hazards exist in some areas of the instrument.

CAUTION

Do not operate the power supply without using the mainframe as a load.

After the cover and fan assembly have been removed from the power supply, all the circuit boards are accessible for troubleshooting (see Fig. 6-8A).

Board Removal

WARNING

Disconnect the power cord from the power supply before removing the boards.

Regulator Board (A60A2). Remove the three 4-40 X 0.500" PHS screws from the heat sink as shown in Fig. 6-8B. Unplug the Regulator board from the Inverter board.

Fan Board (A60A3). Remove the four 4-40 X 0.312" FHS screws shown in Fig. 6-8C. Lift the Fan board from the Inverter board.

Inverter Board (A60A1). First, remove the Regulator board using the procedure previously described. Next, remove the cover from the switching transistor (Q201, Q202) circuitry. Then, remove the two hex posts shown in Fig. 6-8C. Lift the Inverter and Fan board assemblies, with the ac power circuitry, from the chassis.

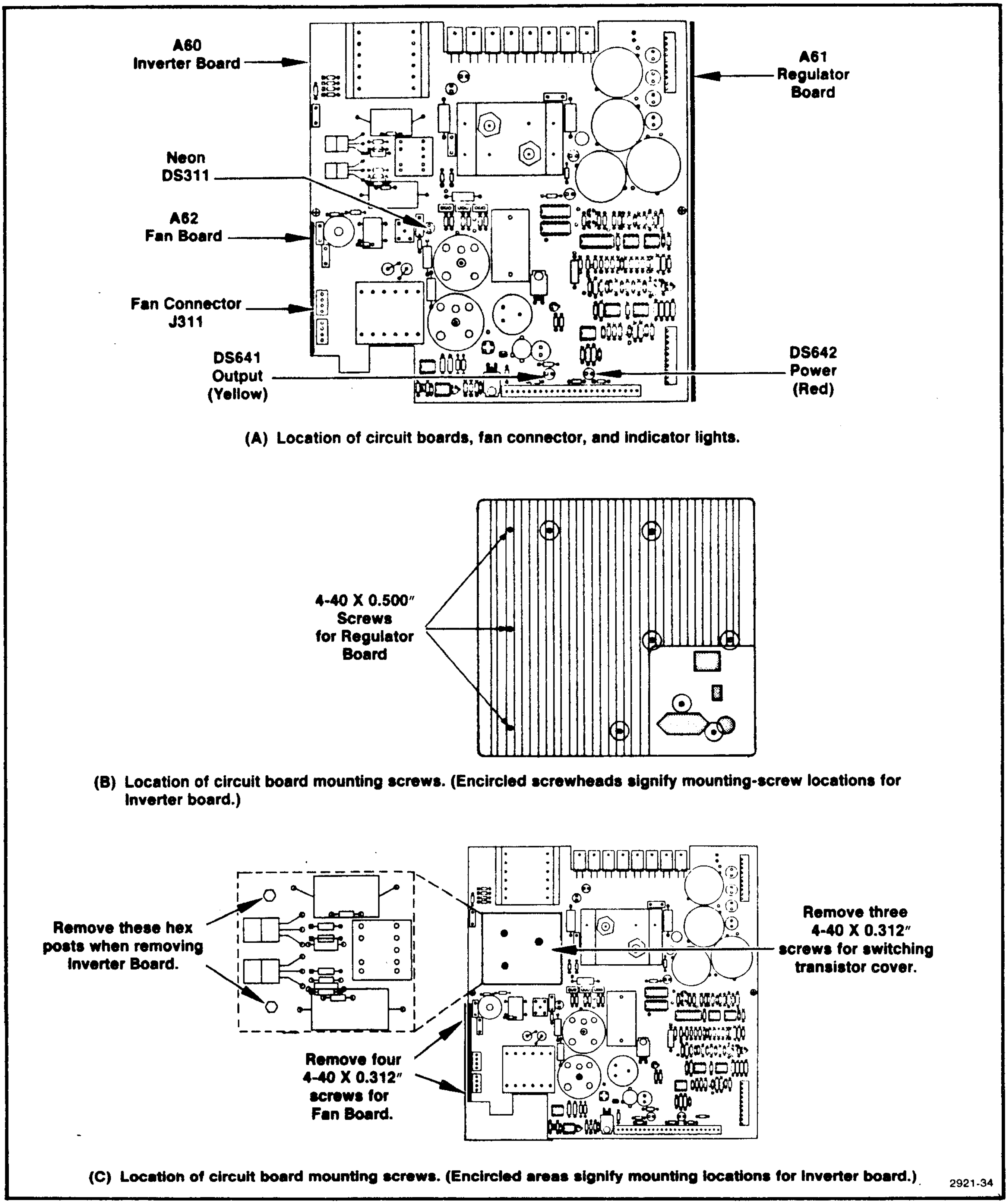


Fig. 6-8. Power Supply Circuit Board and Mounting Screw Locations.

Repackaging for Shipment

Instrument Repackaging. If the Tektronix instrument is to be shipped to a Tektronix Service Center for service or repair, attach a tag showing: owner (with address) and the name of an individual at your firm that can be contacted, complete instrument serial number, and a description of the service required.

Save and re-use the package in which your instrument was shipped. If the original packaging is unfit for use, or not available, repackage the instrument as follows:

1. Obtain a carton of corrugated cardboard having inside dimensions of no less than six inches more than the instrument dimensions. This will allow for cushioning. Refer to Table 6-2 for carton test strength requirements.

2. Surround the instrument with polyethylene sheeting to protect the finish.

3. Cushion the instrument on all sides by tightly packing dunnage or urethane foam between carton and instrument. Allow three inches on all sides.

4. Seal carton with shipping tape or industrial stapler.

TABLE 6-2

Shipping Carton Test Strength

Gross Weight (lb.)	Carton Test Strength (lb.)
0-10	200
10-30	275
30-120	375
120-140	500
140-160	600

Assembly Repackaging. Package assemblies using the same guidelines given for instruments, except wrap circuit boards with a conductive material (such as pink poly) to prevent damage from static charge.

CAUTION

Before repackaging the NVM assembly (A16), both battery switches must be turned off.

OPTIONS

This section documents the options available with the 1980. A summary of the options is included, as well as details pertaining to installation and service where needed. The 1980 options are:

Option 01 NTSC Measurement Applications
Option 02 PAL Measurement Applications
Option 03 FCC Measurement Applications
Option 12 ACE Interface

Applications Options

The measurement applications options include ROM boards that contain the measurement applications programs. The ROM boards are similar to the Operating System ROM board (A28), except contain different sets of components, and are set up for different address locations. Each ROM board is assigned a board position in the instrument. Table 7-1 lists all of the ROM boards in the instrument, their assembly number, their address assignment, and their board position assignment.

ROM Board Addressing. Jumpers on P411 and P412 set the exact address range. Three software hex address ranges are available, and are assigned to specific board positions as follows:

20000 - 3FFFE (position 4)
40000 - 5FFFE (position 8)
60000 - 7FFFE (position 9)

The Operating System ROM board (A28) is assigned to software addresses 20000 through 3FFFE (hex), and is always assigned to board position 4. The other two ranges are used for Applications ROM option boards. Boards in slots 8 and 9 are interchangeable, but the diagnostics terminal messages and written text refer to those slots for the assigned addresses.

ROM Assembly	Address Jumpers P411	Address Jumpers P412	Board Position
A28 Operating System	Jumpered	Open	4
A34 (Option 01)	Open	Jumpered	8
A36 (Option 01)	Open	Open	9
A38 (Option 02)	Open	Open	9
A42 (Option 03)	Open	Jumpered	8

Table 7-1. ROM Board Assignments.

INSTALLATION

Installation information for this product has been placed in a separate volume, titled 1980 Service Installation. That manual is a standard accessory to the 1980, and its part number is located in the Accessories list of this manual.

REPLACEABLE ELECTRICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

LIST OF ASSEMBLIES

A list of assemblies can be found at the beginning of the Electrical Parts List. The assemblies are listed in numerical order. When the complete component number of a part is known, this list will identify the assembly in which the part is located.

CROSS INDEX-MFR. CODE NUMBER TO MANUFACTURER

The Mfr. Code Number to Manufacturer index for the Electrical Parts List is located immediately after this page. The Cross Index provides codes, names and addresses of manufacturers of components listed in the Electrical Parts List.

ABBREVIATIONS

Abbreviations conform to American National Standard Y1.1.

COMPONENT NUMBER (column one of the Electrical Parts List)

A numbering method has been used to identify assemblies, subassemblies and parts. Examples of this numbering method and typical expansions are illustrated by the following:

Example a.

component number

A23R1234 — A23 R1234

Assembly number — Circuit number

Read: Resistor 1234 of Assembly 23

Example b.

component number

A23A2R1234 — A23 A2 R1234

Assembly number — Subassembly number — Circuit number

Read: Resistor 1234 of Subassembly 2 of Assembly 23

Only the circuit number will appear on the diagrams and circuit board illustrations. Each diagram and circuit board illustration is clearly marked with the assembly number. Assembly numbers are also marked on the mechanical exploded views located in the Mechanical Parts List. The component number is obtained by adding the assembly number prefix to the circuit number.

The Electrical Parts List is divided and arranged by assemblies in numerical sequence (e.g., assembly A1 with its subassemblies and parts, precedes assembly A2 with its subassemblies and parts).

Chassis-mounted parts have no assembly number prefix and are located at the end of the Electrical Parts List.

TEKTRONIX PART NO. (column two of the Electrical Parts List)

Indicates part number to be used when ordering replacement part from Tektronix.

SERIAL/MODEL NO. (columns three and four of the Electrical Parts List)

Column three (3) indicates the serial number at which the part was first used. Column four (4) indicates the serial number at which the part was removed. No serial number entered indicates part is good for all serial numbers.

NAME & DESCRIPTION (column five of the Electrical Parts List)

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

MFR. CODE (column six of the Electrical Parts List)

Indicates the code number of the actual manufacturer of the part. (Code to name and address cross reference can be found immediately after this page.)

MFR. PART NUMBER (column seven of the Electrical Parts List)

Indicates actual manufacturers part number.

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
S3109	FELLER ASA ADOLF AG., C/O PANEL COMPONENTS CORP.	355 TESCONI CIRCLE	SANTA ROSA, CA 95401
000FG	RIFA WORLD PRODUCTS INC.	7625 BUSH LAKE RD P.O. BOX 35263	MINNEAPOLIS, MN 55435
000FJ	MARCOM SWITCHES INC.	MARQUARDT 67 ALBANY ST.	CAZENOVIA, N.Y. 13035
000HX	SAN-O INDUSTRIAL CORP.	170 WILBUR PLACE	BAHEMIA, LONG ISLAND, NY. 117
000IF	COMPONENT CONCEPTS INC.	3229 PINE ST.	EVERETT, WA 98201
0000L	MATSUSHITA ELECTRIC	200 PARK AVENUE, 54TH FLOOR	NEW YORK, NY 10017
00779	AMP, INC.	P O BOX 3608	HARRISBURG, PA 17105
00853	SANGAMO ELECTRIC CO., S. CAROLINA DIV.	P O BOX 128	PICKENS, SC 29671
01121	ALLEN-BRADLEY COMPANY	1201 2ND STREET SOUTH	MILWAUKEE, WI 53204
01281	TRW ELECTRONIC COMPONENTS, SEMICONDUCTOR OPERATIONS	14520 AVIATION BLVD.	LAWNDALE, CA 90260
01295	TEXAS INSTRUMENTS, INC., SEMICONDUCTOR GROUP	P O BOX 5012, 13500 N CENTRAL EXPRESSWAY	DALLAS, TX 75222
02735	RCA CORPORATION, SOLID STATE DIVISION	ROUTE 202	SOMERVILLE, NY 08876
02777	HOPKINS ENGINEERING COMPANY	12900 FOOTHILL BLVD.	SAN FERNANDO, CA 91342
03508	GENERAL ELECTRIC COMPANY, SEMI-CONDUCTOR PRODUCTS DEPARTMENT	ELECTRONICS PARK	SYRACUSE, NY 13201
03888	KDI PYROFILM CORPORATION	60 S JEFFERSON ROAD	WHIPPANY, NJ 07981
04222	AVX CERAMICS, DIVISION OF AVX CORP.	P O BOX 867, 19TH AVE. SOUTH	MYRTLE BEACH, SC 29577
04713	MOTOROLA, INC., SEMICONDUCTOR PROD. DIV.	5005 E MCDOWELL RD,PO BOX 20923	PHOENIX, AZ 85036
05574	VIKING INDUSTRIES, INC.	21001 NORDHOFF STREET	CHATSWORTH, CA 91311
07263	FAIRCHILD SEMICONDUCTOR, A DIV. OF FAIRCHILD CAMERA AND INSTRUMENT CORP.	464 ELLIS STREET	MOUNTAIN VIEW, CA 94042
09023	CORNELL-DUBILIER ELECTRONIC DIVISION FEDERAL PACIFIC ELECTRIC CO.	2652 DALRYMPLE ST.	SANFORD, NC 27330
09353	C AND K COMPONENTS, INC.	103 MORSE STREET	WATERTOWN, MA 02172
10389	CHICAGO SWITCH, INC.	2035 WABANSIA AVE.	CHICAGO, IL 60647
14433	ITT SEMICONDUCTORS	3301 ELECTRONICS WAY P O BOX 3049	WEST PALM BEACH, FL 33402
14752	ELECTRO CUBE INC.	1710 S. DEL MAR AVE.	SAN GABRIEL, CA 91776
15454	RODAN INDUSTRIES, INC.	2905 BLUE STAR ST.	ANAHEIM, CA 92806
17856	SILICONIX, INC.	2201 LAURELWOOD DRIVE	SANTA CLARA, CA 95054
19209	GENERAL ELECTRIC CO., ELECTRONIC CAPACITOR AND BATTERY PRODUCTS DEPT. BATTERY PRODUCTS SEC.	P. O. BOX 114	GAINESVILLE, FL 32601
19396	ILLINOIS TOOL WORKS, INC. PAKTRON DIV.	900 FOLLIN LANE, SE	VIENNA, VA 22180
22526	BERG ELECTRONICS, INC.	YOUK EXPRESSWAY	NEW CUMBERLAND, PA 17070
24546	CORNING GLASS WORKS, ELECTRONIC COMPONENTS DIVISION	550 HIGH STREET	BRADFORD, PA 16701
24931	SPECIALITY CONNECTOR CO., INC.	2620 ENDRESS PLACE	GREENWOOD, IN 46142
27014	NATIONAL SEMICONDUCTOR CORP.	2900 SEMICONDUCTOR DR.	SANTA CLARA, CA 95051
27264	MOLEX PRODUCTS CO.	5224 KATRINE AVE.	DOWNERS GROVE, IL 60515
32159	WEST-CAP ARIZONA	2201 E. ELVIRA ROAD	TUCSON, AZ 85706
32997	BOURNS, INC., TRIMPOT PRODUCTS DIV.	1200 COLUMBIA AVE.	RIVERSIDE, CA 92507
33096	COLORADO CRYSTAL CORPORATION	2303 W 8TH STREET	LOVELAND, CO 80537
34335	ADVANCED MICRO DEVICES	901 THOMPSON PL.	SUNNYVALE, CA 94086
50434	HEWLETT-PACKARD COMPANY	640 PAGE MILL ROAD	PALO ALTO, CA 94304
51642	CENTRE ENGINEERING INC.	2820 E COLLEGE AVENUE	STATE COLLEGE, PA 16801
53184	XCITON CORPORATION	5 HEMLOCK STREET	LATHAM, NY 12110
53944	ELT INC., GLOW LITE DIVISION	BOX 698	PAULS VALLEY, OK 73075
54473	MATSUSHITA ELECTRIC, CORP. OF AMERICA	1 PANASONIC WAY	SECAUCUS, NJ 07094
55680	NICHICON/AMERICA/CORP.	6435 N PROESEL AVENUE	CHICAGO, IL 60645
56289	SPRAGUE ELECTRIC CO.	87 MARSHALL ST.	NORTH ADAMS, MA 01247
58361	GENERAL INSTRUMENT CORP. OPTO ELECTRONICS DIV.	3400 HILLVIEW AVE	PALO ALTO, CA 94304
59660	TUSONIX INC.	2155 N FORBES BLVD	TUCSON, AZ 85705
70903	BELDEN CORP.	2000 S BATAVIA AVENUE	GENEVA, IL 60134
71400	BUSSMAN MFG., DIVISION OF MCGRAW-EDISON CO.	2536 W. UNIVERSITY ST.	ST. LOUIS, MO 63107
71468	ITT CANNON ELECTRIC	666 E. DYER RD.	SANTA ANA, CA 92702
72982	ERIE TECHNOLOGICAL PRODUCTS, INC.	644 W. 12TH ST.	ERIE, PA 16512
74276	SIGNALITE DIV., GENERAL INSTRUMENT CORP.	1933 HECK AVE.	NEPTUNE, NJ 07753
75037	MINNESOTA MINING & MFG CO. ELECTRO PRODUCTS DIV.	3M CENTER	ST. PAUL, MN 55101

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
75042	TRW ELECTRONIC COMPONENTS, IRC FIXED RESISTORS, PHILADELPHIA DIVISION	401 N. BROAD ST.	PHILADELPHIA, PA 19108
80009	TEKTRONIX, INC.	P O BOX 500	BEAVERTON, OR 97077
80126	PACIFIC ELECTRICORD CO.	747 W. REDONDO BEACH,P O BOX 10	GARDENA, CA 90247
84411	TRW ELECTRONIC COMPONENTS, TRW CAPACITORS	112 W. FIRST ST.	OGALLALA, NE 69153
90201	MALLORY CAPACITOR CO., DIV. OF P. R. MALLORY AND CO., INC.	3029 E. WASHINGTON STREET P. O. BOX 372	INDIANAPOLIS, IN 46206
91418	RADIO MATERIALS COMPANY, DIV. OF P.R. MALLORY AND COMPANY, INC.	4242 W BRYN MAWR	CHICAGO, IL 60646
91637	DALE ELECTRONICS, INC.	P. O. BOX 609	COLUMBUS, NE 68601

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A10	672-0780-00	B010100	B019999	CKT BOARD ASSY:CPU W/PROMS	80009	672-0780-00
A10	672-0780-01	B020000		CKT BOARD ASSY:CPU W/PROMS	80009	672-0780-01
A14	670-5704-00			CKT BOARD ASSY:DYNAMIC RAM	80009	670-5704-00
A16	670-5693-00			CKT BOARD ASSY:NON VOLATILE MEMORY/RT CLK	80009	670-5693-00
A18	670-5692-00	B010100	B029999	CKT BOARD ASSY:VIDEO ACQUISITON MEMORY	80009	670-5692-00
A18	670-5692-01	B030000		CKT BOARD ASSY:VIDEO ACQUISITION MEMORY	80009	670-5692-01
A20	670-5694-00	B010100	B029999	CKT BOARD ASSY:VIDEO ACQ MEMORY CONTROLLER	80009	670-5694-00
A20	670-5694-01	B030000		CKT BOARD ASSY:VIDEO ACQ MEMORY CONTROLLER	80009	670-5694-01
A22	670-5697-00			CKT BOARD ASSY:DIGITAL FEEDBACK	80009	670-5697-00
A24	672-0777-00	B010100	B029999	CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0777-00
A24	672-0777-01	B030000	B030239	CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0777-01
A24	672-0777-02	B030240		CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0777-02
A24A1	672-0893-01	B010100	B030239	CKT BOARD ASSY:VIDEO DATA CONVERTER A/D	80009	672-0893-01
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1	672-0893-02	B030240		CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0893-02
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1	670-5695-02			CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	670-5695-02
A24A1A1	672-0988-00			CKT BOARD ASSY:ADC ASSEMBLY	80009	672-0988-00
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1A2	670-5956-00	B010100	B029999	CKT BOARD ASSY:FILTER	80009	670-5956-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A2	670-7459-00	B030000		CKT BOARD ASSY:FILTER	80009	670-7459-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A3	670-5956-00			CKT BOARD ASSY:FILTER	80009	670-5956-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A4	670-5956-00	B010100	B029999	CKT BOARD ASSY:FILTER	80009	670-5956-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A4	670-7583-00	B030000		CKT BOARD ASSY:FILTER	80009	670-7583-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A5	670-7340-00	XB029999		CKT BOARD ASSY:TEMP C-N	80009	670-7340-00
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1A6	670-7339-00	XB029999		CKT BOARD ASSY:TEMP C-P	80009	670-7339-00
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A28	672-0778-00	B010100	B010192	CKT BOARD ASSY:ROM/PROM OPERATING SYSTEM	80009	672-0778-00
A28	672-0778-01	B010193	B019999	CKT BOARD ASSY:ROM/PROM OPERATING SYSTEM	80009	672-0778-01
A28	672-0778-02	B020000		CKT BOARD ASSY:ROM/PROM OPERATING SYSTEM	80009	672-0778-02
A28	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A30	672-0826-00			CKT BOARD ASSY:I/O(RS232)W/CONN & BRACKETS	80009	672-0826-00
A30	672-0826-01			CKT BOARD ASSY:I/O(RS232)W/CONN & BRACKETS	80009	672-0826-01
	----- -----			(OPTION 12 ONLY)		
A30	670-5698-00			CKT BOARD ASSY:I/O INTERFACE	80009	670-5698-00
A34	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A34	672-0891-00			CKT BOARD ASSY:ROM/PROM APPLICATIONS NTSC	80009	672-0891-00
	----- -----			(V.1 ASSY A, OPTION 1 ONLY)		
A36	672-0939-00			CKT BOARD ASSY:ROM/PROM APPLICATIONS NTSC	80009	672-0939-00
	----- -----			(V.1 ASSY. B, OPTION 1 ONLY)		
A36	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A38	672-1050-00			CKT BOARD ASSY:PAL APPLICATIONS	80009	672-1050-00
	----- -----			(V1.1 ASSY B, OPTION 2 ONLY)		
A38	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A40	670-5701-00			CKT BOARD ASSY:FRONT PANEL	80009	670-5701-00
A42	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A50	672-0877-00			CKT BOARD ASSY:MAIN INTERFACE W/HARDWARE	80009	672-0877-00
A50	670-6412-00			CKT BOARD ASSY:MAIN INTERFACE	80009	670-6412-00
A60	620-0286-00			POWER SUPPLY:	80009	620-0286-00
	----- -----			(OPTION 1, OPTION 3 ONLY)		
	644-0213-00			INVERTER ASSY:	80009	644-0213-00
	----- -----			(OPTION 1, OPTION 3 ONLY)		
A60	620-0286-01			POWER SUPPLY:	80009	620-0286-01

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
	644-0213-01			INVERTER ASSY:	80009	644-0213-01
	----- -----			(OPTION 2 ONLY)		
	644-0156-00			REGULATOR ASSY:	80009	644-0156-00
A60A1	670-6046-00			CKT BOARD ASSY:INVERTER	80009	670-6046-00
A60A1	670-6046-01			CKT BOARD ASSY:INVERTER	80009	670-6046-01
A60A1	----- -----			(USED WITH 620-0286-01 ONLY)		
A60A2	670-6045-00			CKT BOARD ASSY:REGULATOR	80009	670-6045-00
A60A3	670-5613-00			CKT BOARD ASSY:FAN REGULATOR	80009	670-5613-00
A60A4	670-7444-00			CKT BOARD ASSY:LINE FILTER	80009	670-7444-00
	----- -----			(USED WITH 620-0286-01 ONLY)		
A10	672-0780-00	B010100	B019999	CKT BOARD ASSY:CPU W/PROMS	80009	672-0780-00
A10	672-0780-01	B020000		CKT BOARD ASSY:CPU W/PROMS	80009	672-0780-01
A10C001	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C016	290-0534-00			CAP.,FXD,ELCTLT:1UF,20%,35V	56289	196D105X0035HA1
A10C061	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C132	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C142	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C172	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C221	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C232	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C242	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C252	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C272	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C301	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C312	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C313	281-0506-00			CAP.,FXD,CER DI:12PF,+/-1.2PF,500V	59660	301-000C0G0120K
A10C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C352	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C371	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C411	290-0219-00			CAP.,FXD,ELCTLT:5UF,+75-10%,25V	56289	30D505G025BA9
A10C430	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C440	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C450	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C471	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C511	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C512	283-0775-00			CAP.,FXD,MICA D:1764 PF,1%,500V	00853	D19-5F17640F0
A10C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C542	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C552	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C561	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

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A10C612	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C621	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C631	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C641	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C651	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C652	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C661	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C671	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C711	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C712	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C721	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C731	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C732	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C741	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C742	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C751	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C752	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10C761	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A10DS001	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
A10DS002	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
A10DS003	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
A10DS004	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
A10DS005	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
A10L313	108-0262-00			COIL,RF:FIXED,510NH	80009	108-0262-00
A10P011	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
A10P015	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P031	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
A10P041	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P050	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P051	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P061	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
A10P080	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P472	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P430L	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P430M	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P650L	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10P650M	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10R001	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A10R009	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A10R010	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A10R011	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A10R015	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A10R016	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A10R051	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R052	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A10R053	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A10R070	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A10R075	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A10R076	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A10R077	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A10R080	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A10R113	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A10R151	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A10R171	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A10R251	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
A10R311	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R313	315-0150-00			RES.,FXD,CMPSN:15 OHM,5%,0.25W	01121	CB1505

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A10R314	315-0150-00			RES.,FXD,CMPSN:15 OHM,5%,0.25W	01121	CB1505
A10R315	315-0150-00			RES.,FXD,CMPSN:15 OHM,5%,0.25W	01121	CB1505
A10R316	315-0150-00			RES.,FXD,CMPSN:15 OHM,5%,0.25W	01121	CB1505
A10R322	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A10R351	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R352	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R361	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A10R371	315-0621-00			RES.,FXD,CMPSN:620 OHM,5%,0.25W	01121	CB6215
A10R450	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R452	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
A10R453	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A10R454	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A10R472	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R512	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R532	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R541	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A10R561	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R580	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A10R632	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A10R651	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R671	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R700	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A10R710	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A10R730	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A10R762	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R763	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A10R800	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A10R801	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A10R802	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A10R803	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
A10S010	260-1962-00			SWITCH,PUSH:SPDT,0.4VA,20V	09353	8125AE
A10S050	260-1962-00			SWITCH,PUSH:SPDT,0.4VA,20V	09353	8125AE
A10TP121	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP161	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP200	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP201	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP202	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP203	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP204	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP241	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP242	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP441	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP621	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP641	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP661	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10TP711	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A10U001	156-0914-02			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT	01295	SN74LS240
A10U031	160-0543-00	-----	-----	MICROCIRCUIT,DI:2080 X 8 EPROM,PROGRAMMED (672-0780-00 ONLY)	80009	160-0543-00
A10U031	160-0543-02	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (672-0780-01 ONLY)	80009	160-0543-02
A10U032	160-0544-00	-----	-----	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (672-0780-00 ONLY)	80009	160-0544-00
A10U032	160-0544-02	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (672-0780-01 ONLY)	80009	160-0544-02
A10U041	156-0718-03	-----	-----	MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE (SCREENED)	01295	SN74LS27

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A10U051	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A10U061	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILITY)	01295	SN74LS00
A10U101	156-0874-02 ----- -----			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH (SCREENED)	80009	156-0874-02
A10U111	156-0386-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INPUT NAND GATE (SCREENED)	01295	SN74LS10
A10U112	156-0539-01 ----- -----			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A10U121	156-1127-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
A10U131	156-1127-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
A10U132	156-1127-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
A10U141	156-1127-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
A10U142	156-0386-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INPUT NAND GATE (SCREENED)	01295	SN74LS10
A10U151	156-0385-02 ----- -----			MICROCIRCUIT,DI:HEX INVERTER (SCREENED)	01295	SN74LS04
A10U152	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
A10U161	156-0381-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP EXCL OR GATE (SCREENED)	01295	SN74LS86
A10U171	156-0539-01 ----- -----			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A10U172	156-0387-02 ----- -----			MICROCIRCUIT,DI:DUAL J-K FF,BURN-IN (SCREENED)	01295	SN74LS73
A10U201	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILITY)	01295	SN74LS00
A10U211	156-0459-02			MICROCIRCUIT,DI:QUAD 2-INPUT & GATE,BURN-IN	01295	SN74S08
A10U212	156-0464-02 ----- -----			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE (SCREENED)	01295	SN74LS20
A10U221	156-1127-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
A10U231	156-1127-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
A10U232	156-1127-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
A10U241	156-1127-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
A10U242	156-0464-02 ----- -----			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE (SCREENED)	01295	SN74LS20
A10U251	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILTY)	01295	SN74LS00
A10U252	156-0385-02 ----- -----			MICROCIRCUIT,DI:HEX INVERTER (SCREENED)	01295	SN74LS04
A10U261	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A10U271	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A10U272	156-1267-00 ----- -----			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER (SCREENED)	04713	SN74LS15
A10U301	156-0321-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S10
A10U311	156-0993-01 ----- -----			MICROCIRCUIT,INTFC:4 PHASE CLOCK GEN/DR (SCREENED)	80009	156-0993-01
A10U351	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A10U352	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (SCREENED)	01295	SN74LS00
A10U361	156-1295-00			MICROCIRCUIT,DI:ASYNCHRONOUS COMMUNICATION	80009	156-1295-00
A10U371	156-1295-00			MICROCIRCUIT,DI:ASYNCHRONOUS COMMUNICATION	80009	156-1295-00
A10U372	156-1295-00			MICROCIRCUIT,DI:ASYNCHRONOUS COMMUNICATION	80009	156-1295-00

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A10U401	156-0321-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S10
A10U441	156-0935-02 ----- -----			MICROCIRCUIT,DI:MICROPROCESSOR,16 BIT (SCREENED,9900)	80009	156-0935-02
A10U452	156-0303-01 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN)	01295	SN74S03
A10U461	156-0404-01 ----- -----			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE (BURN-IN)	80009	156-0404-01
A10U471	156-0320-03 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S11NP3
A10U501	156-1296-00			MICROCIRCUIT,DI:PROGRAMMABLE SYSTEMS INTFC	80009	156-1296-00
A10U511	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4
A10U512	160-0458-01			MICROCIRCUIT,DI:32 X 8 PROM,PRGM	80009	160-0458-01
A10U521	156-1189-01 ----- -----			MICROCIRCUIT,DI:16 X 4 STATIC RAM,SCREENED (SCREENED)	34335	AM74S189JB
A10U531	156-1189-01 ----- -----			MICROCIRCUIT,DI:16 X 4 STATIC RAM,SCREENED (SCREENED)	34335	AM74S189JB
A10U532	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN)	01295	SN74S00NP3
A10U541	156-0331-03 ----- -----			MICROCIRCUIT,DI:DUAL D TYPE POS EDGE TRIG (BURN-IN)	80009	156-0331-03
A10U542	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A10U551	156-0321-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S10
A10U552	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILITY)	01295	SN74LS00
A10U561	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
A10U571	156-0844-02			MICROCIRCUIT,DI:SYN 4 BIT CNTR,SCRN	01295	SN74LS161A
A10U611	156-0530-02			MICROCIRCUIT,DI:QUAD 2-INP MUX,SCRN	01295	SN74LS157P3
A10U612	156-0470-02 ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED)	01295	SN74LS251
A10U621	156-1189-01			MICROCIRCUIT,DI:16 X 4 STATIC RAM,SCREENED	34335	AM74S189JB
A10U631	156-1189-01			MICROCIRCUIT,DI:16 X 4 STATIC RAM,SCREENED	34335	AM74S189JB
A10U632	156-0385-02 ----- -----			MICROCIRCUIT,DI:HEX INVERTER (SCREENED)	01295	SN74LS04
A10U641	156-1058-01 ----- -----			MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT (SCREENED)	01295	SN74S240JP4
A10U651	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
A10U652	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
A10U661	156-0385-02 ----- -----			MICROCIRCUIT,DI:HEX INVERTER (SCREENED)	01295	SN74LS04
A10U671	156-0844-02			MICROCIRCUIT,DI:SYN 4 BIT CNTR,SCRN	01295	SN74LS161A
A10U711	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4
A10U712	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A10U721	156-1058-01 ----- -----			MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT (SCREENED)	01295	SN74S240JP4
A10U731	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4
A10U732	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4
A10U741	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4
A10U742	156-0955-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	04713	SN74LS241

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A10U751	156-0955-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	04713	SN74LS241
A10U752	156-0955-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	04713	SN74LS241
A10U761	156-0955-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	04713	SN74LS241
A10U771	156-0798-02 ----- -----			MICROCIRCUIT,DI:DUAL 14 TO 1 LINE SEL/MUX (SCREENED)	01295	SN74LS153
A10Y310	158-0173-00			XTAL UNIT,QTZ:46.0 MHZ,0.01% SERIES	33096	PB3060

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A14	670-5704-00			CKT BOARD ASSY:DYNAMIC RAM	80009	670-5704-00
A14C011	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C101	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C102	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C221	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C222	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C232	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C242	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C251	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C252	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C301	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C321	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C322	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C332	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C342	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C352	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C353	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A14C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C402	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C411	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C422	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C431	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C432	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C441	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C442	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C451	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C452	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C511	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C522	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C532	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C542	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C552	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C553	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A14C610	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C611	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C612	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C641	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C642	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C651	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14C652	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A14P610	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14P613	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14R004	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025

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A14R011	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A14R013	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A14R115	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A14R211	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A14R212	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A14R213	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A14R222	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A14R311	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A14R312	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A14R313	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A14R314	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A14R322	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A14R323	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A14R401	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A14R402	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A14R410	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A14R411	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A14R412	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A14R421	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A14R502	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A14R503	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A14R511	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A14R512	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A14R513	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A14R514	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A14R601	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A14R602	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A14R631	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A14R641	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A14TP200	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP201	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP202	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP302	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP303	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP304	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP401	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP501	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP612	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP613	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14TP614	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A14U011	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U101	156-0382-02	-----	-----	MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILITY)	01295	SN74LS00
A14U102	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U111	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U201	156-0386-02	-----	-----	MICROCIRCUIT,DI:TRIPLE 3-INPUT NAND GATE (SCREENED)	01295	SN74LS10
A14U211	156-0844-02			MICROCIRCUIT,DI:SYN 4 BIT CNTR,SCRN	01295	SN74LS161A
A14U221	156-0968-02	-----	-----	MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U222	156-0968-02	-----	-----	MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U231	156-0968-02	-----	-----	MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A14U232	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U241	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U242	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U251	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U252	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U301	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILITY)	01295	SN74LS00
A14U311	156-0844-02			MICROCIRCUIT,DI:SYN 4 BIT CNTR,SCRN	01295	SN74LS161A
A14U321	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U322	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U331	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U332	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U341	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U342	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U351	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U352	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U401	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILITY)	01295	SN74LS00
A14U402	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U411	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U421	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U422	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U431	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U432	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U441	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U442	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U451	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U452	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U511	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U521	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U522	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A14U531	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U532	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U541	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U542	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U551	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U552	156-0968-02 ----- -----			MICROCIRCUIT,DI:16384 X 1 DYNAMIC RAM (SCREENED)	80009	156-0968-02
A14U610	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A14U611	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U612	156-0914-02 ----- -----			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT (SCREENED)	01295	SN74LS240
A14U641	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U642	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U651	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A14U652	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A16	670-5693-00			CKT BOARD ASSY:NON VOLATILE MEMORY/RT CLK	80009	670-5693-00
A16BT190	146-0035-00			BATTERY,STORAGE:3.75VDC,1/3 AA CELL	19209	41B901CD14G1
A16BT590	146-0035-00			BATTERY,STORAGE:3.75VDC,1/3 AA CELL	19209	41B901CD14G1
A16C013	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C020	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C030	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C040	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C100	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C101	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C102	281-0773-00			CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A16C110	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C120	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C130	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C140	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C150	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C160	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C168	281-0093-00			CAP.,VAR,CER DI:5.5-18PF	59660	538-011A5.5-18
A16C169	283-0615-00			CAP.,FXD,MICA D:33PF,5%,500V	00853	D155E330J0
A16C171	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C172	290-0536-00			CAP.,FXD,ELCTLT:10UF,20%,25V	90201	TDC106M025FL
A16C174	283-0663-00			CAP.,FXD,MICA D:16.8PF,+/-0.5PF,500V	00853	D155C16R8D0
A16C181	283-0649-00			CAP.,FXD,MICA D:105PF,1%,300V	00853	D153F1050F0
A16C200	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C210	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C230	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C240	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C250	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C260	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C270	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C271	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C285	290-0522-00			CAP.,FXD,ELCTLT:1UF,20%,50V	56289	196D105X0050HA1
A16C288	290-0536-00			CAP.,FXD,ELCTLT:10UF,20%,25V	90201	TDC106M025FL
A16C290	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C300	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C310	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C320	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C330	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C340	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C350	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C369	281-0773-00			CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A16C370	281-0773-00			CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A16C371	283-0615-00			CAP.,FXD,MICA D:33PF,5%,500V	00853	D155E330J0
A16C372	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C378	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C380	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C381	283-0000-00			CAP.,FXD,CER DI:0.001UF,+100-0%,500V	59660	0831610Y5P0102D
A16C383	290-0522-00			CAP.,FXD,ELCTLT:1UF,20%,50V	56289	196D105X0050HA1
A16C392	283-0770-00			CAP.,FXD,MICA D:300PF,1%,500V	00853	D15-5F301F0
A16C395	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C397	281-0167-00			CAP.,VAR,CER DI:9-45PF,200V	59660	538-011D9-45
A16C399	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A16C400	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C402	290-0536-00			CAP.,FXD,ELCTLT:10UF,20%,25V	90201	TDC106M025FL
A16C420	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C430	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C431	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C440	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C441	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C450	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C451	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C460	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C461	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C500	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C501	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C502	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C520	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C530	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C540	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C550	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C560	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C561	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C570	290-0650-01			CAP.,FXD,ELCTLT:1000UF,20%,10V	56289	109D108X0010T2
A16C601	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C620	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C621	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C630	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C631	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C640	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C641	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C650	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C651	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C660	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C661	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C678	290-0755-00			CAP.,FXD,ELCTLT:100UF,+50-10%,10V	56289	502D223
A16C711	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C720	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C721	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C730	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C731	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C740	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C741	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C750	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C751	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C760	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C761	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C781	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C810	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C821	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C841	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C881	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C900	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16C950	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A16C960	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A16CR084	152-0333-00			SEMICOND DEVICE:SILICON,55V,200MA	07263	FDH-6012
A16CR285	152-0333-00			SEMICOND DEVICE:SILICON,55V,200MA	07263	FDH-6012
A16CR289	152-0333-00			SEMICOND DEVICE:SILICON,55V,200MA	07263	FDH-6012
A16CR313	152-0075-00			SEMICOND DEVICE:GE,25V,40MA	14433	G866
A16CR373	152-0246-00			SEMICOND DEVICE:SW,SI,40V,200MA	03508	DE140
A16CR375	152-0246-00			SEMICOND DEVICE:SW,SI,40V,200MA	03508	DE140
A16CR682	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
	----- -----			(670-5693-00 ONLY)		
A16CR686	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
	----- -----			(670-5693-00 ONLY)		
A16CR890	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A16CR891	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A16CR996	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A16DS060	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
A16F686	159-0114-00			FUSE,CARTRIDGE:1A,125VAC,FAST-BLOW	71400	GFA 1
	----- -----			(670-5693-00 ONLY)		
A16L397	108-0237-00			COIL,RF:80UH	80009	108-0237-00
A16P008	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16P009	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16P017	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16P803	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16P805	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16P897	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16Q050	151-0190-00			TRANSISTOR:SILICON,NPN	07263	S032677
A16Q170	151-1066-00			TRANSISTOR:SILICON,FE,P-CHANNEL	80009	151-1066-00
A16Q581	151-0223-00			TRANSISTOR:SILICON,NPN	04713	SPS8026
A16Q680	151-0223-00			TRANSISTOR:SILICON,NPN	04713	SPS8026
A16Q681	151-0188-00			TRANSISTOR:SILICON,PNP	04713	SPS6868K
A16R006	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A16R020	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A16R040	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A16R060	315-0302-00			RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A16R082	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A16R084	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A16R085	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A16R086	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A16R171	315-0562-00			RES.,FXD,CMPSN:5.6K OHM,5%,0.25W	01121	CB5625
A16R181	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A16R182	315-0204-00			RES.,FXD,CMPSN:200K OHM,5%,0.25W	01121	CB2045
A16R183	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A16R188	315-0622-00			RES.,FXD,CMPSN:6.2K OHM,5%,0.25W	01121	CB6225
A16R189	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A16R288	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A16R311	315-0751-00			RES.,FXD,CMPSN:750 OHM,5%,0.25W	01121	CB7515
A16R312	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A16R313	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
A16R368	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A16R370	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A16R371	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A16R372	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A16R373	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A16R374	315-0392-00			RES.,FXD,CMPSN:3.9K OHM,5%,0.25W	01121	CB3925
A16R381	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A16R388	315-0301-00			RES.,FXD,CMPSN:300 OHM,5%,0.25W	01121	CB3015
A16R391	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A16R395	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A16R396	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A16R398	321-0085-00			RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
A16R400	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A16R420	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A16R481	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A16R500	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A16R570	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A16R580	315-0622-00			RES.,FXD,CMPSN:6.2K OHM,5%,0.25W	01121	CB6225
A16R581	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
	----- -----			(670-5693-00 ONLY)		
A16R581	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
	----- -----			(670-5693-00 ONLY, CHECKED)		
A16R582	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A16R585	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A16R587	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A16R588	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A16R600	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
A16R610	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A16R680	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A16R685	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A16R688	315-0301-00			RES.,FXD,CMPSN:300 OHM,5%,0.25W	01121	CB3015
A16R711	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
A16R730	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A16R770	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A16R810	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A16R870	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A16R885	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A16R892	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A16R930	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A16R996	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A16R997	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A16S081	260-1641-00			SWITCH,SLIDE:DPDT,0.5A,125VAC	10389	23-021-114
A16S087	260-1641-00			SWITCH,SLIDE:DPDT,0.5A,125VAC	10389	23-021-114
A16TP007	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP018	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP177	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP181	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP284	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP285	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP311	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP887	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP896	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16TP898	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A16U020	156-0547-03			MICROCIRCUIT,DI:QUAD 2-INP MUX,BURN-IN	80009	156-0547-03
A16U030	156-0545-01			MICROCIRCUIT,DI:12 BIT BINARY CNTR,SCRN	04713	MC14040BCLD
A16U040	156-0545-01			MICROCIRCUIT,DI:12 BIT BINARY CNTR,SCRN	04713	MC14040BCLD
A16U060	156-0545-01			MICROCIRCUIT,DI:12 BIT BINARY CNTR,SCRN	04713	MC14040BCLD
A16U100	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
	----- -----			(SCREENED)		
A16U101	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
	----- -----			(SCREENED)		
A16U110	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
	----- -----			(SCREENED)		
A16U120	156-0330-02			MICROCIRCUIT,DI:HEX BUFFER	04713	MC14050BCLD
	----- -----			(SCREENED)		
A16U121	156-0913-02			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN	04713	SN74LS377NDS
	----- -----			(SCREENED)		

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A16U130	156-0330-02 ----- -----			MICROCIRCUIT,DI:HEX BUFFER (SCREENED)	04713	MC14050BCLD
A16U131	156-0913-02 ----- -----			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (SCREENED)	04713	SN74LS377NDS
A16U140	156-0330-02 ----- -----			MICROCIRCUIT,DI:HEX BUFFER (SCREENED)	04713	MC14050BCLD
A16U141	156-0913-02 ----- -----			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (SCREENED)	04713	SN74LS377NDS
A16U150	156-0330-02 ----- -----			MICROCIRCUIT,DI:HEX BUFFER (SCREENED)	04713	MC14050BCLD
A16U160	156-0330-02 ----- -----			MICROCIRCUIT,DI:HEX BUFFER (SCREENED)	04713	MC14050BCLD
A16U161	156-0913-02 ----- -----			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (SCREENED)	04713	SN74LS377NDS
A16U171	156-1274-00			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	80009	156-1274-00
A16U180	156-0921-01			MICROCIRCUIT,LI:OPERATIONAL,AMPLIFIER,SEL	80009	156-0921-01
A16U200	156-0874-02 ----- -----			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH (SCREENED)	80009	156-0874-02
A16U210	156-0874-02 ----- -----			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH (SCREENED)	80009	156-0874-02
A16U220	156-0874-02 ----- -----			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH (SCREENED)	80009	156-0874-02
A16U230	156-0470-02 ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED)	01295	SN74LS251
A16U240	156-0470-02 ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED)	01295	SN74LS251
A16U250	156-0470-02 ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED)	01295	SN74LS251
A16U260	156-0470-02 ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED)	01295	SN74LS251
A16U270	156-0515-03			MICROCIRCUIT,DI:TPL 2 CHAN MUX,SCREENED	80009	156-0515-03
A16U271	156-0579-02			MICROCIRCUIT,DI:DUAL 4 BIT BIN COUNTER,SEL	80009	156-0579-02
A16U300	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A16U310	156-0479-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP ORGATE (SCREENED)	01295	SN74LS32NP3
A16U320	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A16U330	156-1172-01			MICROCIRCUIT,DI:DUAL 4 BIT CNTR,BURN-IN	01295	SN74LS393
A16U340	156-0366-02			MICROCIRCUIT,DI:DUAL D FLIP-FLOP,CHK	80009	156-0366-02
A16U350	156-0494-02			MICROCIRCUIT,DI:HEX INV/BUFF,SELECTED	80009	156-0494-02
A16U360	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILITY)	01295	SN74LS00
A16U370	156-0545-01			MICROCIRCUIT,DI:12 BIT BINARY CNTR,SCRN	04713	MC14040BCLD
A16U380	156-0941-01 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN)	27014	MM74C00
A16U400	156-0388-03 ----- -----			MICROCIRCUIT,DI:DUAL D FLIP-FLOP (SCREENED)	07263	74LS74A
A16U401	156-0733-02			MICROCIRCUIT,DI:DUAL MONOSTABLE MV,SCRN	04713	SN74LS221N/J
A16U410	156-0470-02 ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED)	01295	SN74LS251
A16U420	156-0938-01 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	27014	MM74C10
A16U421	156-0938-01 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	27014	MM74C10
A16U430	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U431	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A16U440	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U441	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U450	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U451	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U460	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U461	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U481	156-0921-01			MICROCIRCUIT,LI:OPERATIONAL,AMPLIFIER,SEL	80009	156-0921-01
A16U500	156-0385-02 ----- -----			MICROCIRCUIT,DI:HEX INVERTER (SCREENED)	01295	SN74LS04
A16U501	156-0303-01 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN)	01295	SN74S03
A16U520	156-0938-01 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	27014	MM74C10
A16U521	156-0938-01 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	27014	MM74C10
A16U530	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U531	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U540	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U541	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U550	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U551	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U560	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U561	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U600	156-0539-01 ----- -----			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A16U601	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A16U620	156-0938-01 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	27014	MM74C10
A16U621	156-0938-01 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	27014	MM74C10
A16U630	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U631	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U640	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U641	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U650	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U651	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U660	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U661	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U711	156-0387-02			MICROCIRCUIT,DI:DUAL J-K FF,BURN-IN	01295	SN74LS73
A16U720	156-0874-02 ----- -----			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH (SCREENED)	80009	156-0874-02
A16U721	156-0404-01 ----- -----			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE (BURN-IN)	80009	156-0404-01
A16U730	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U731	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U740	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U741	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U750	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U751	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U760	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U761	156-1301-01			MICROCIRCUIT,DI:1024 X 4 STATIC RAM,SCRN	80009	156-1301-01
A16U781	156-1111-02 ----- -----			MICROCIRCUIT,DI:OCTAL BUS TRANSCEIVERS (SCREENED)	01295	SN74LS245JP3
A16U810	156-0385-02 ----- -----			MICROCIRCUIT,DI:HEX INVERTER (SCREENED)	01295	SN74LS04
A16U821	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A16U841	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		
A16U881	156-1111-02			MICROCIRCUIT,DI:OCTAL BUS TRANSCEIVERS	01295	SN74LS245JP3
	----- -----			(SCREENED)		
A16U900	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
	----- -----			(SCREENED)		
A16U920	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
	----- -----			(SCREENED)		
A16U950	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		
A16U960	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		
A16VR183	152-0166-00			SEMICOND DEVICE:ZENER,0.4W,6.2V,5%	04713	SZ11738
A16VR289	152-0195-00			SEMICOND DEVICE:ZENER,0.4W,5.1V,5%	04713	SZ11755
A16VR580	152-0166-00			SEMICOND DEVICE:ZENER,0.4W,6.2V,5%	04713	SZ11738
A16VR680	152-0689-00			SEMICOND DEVICE:ZENER,0.4W,5%,3.9V	80009	152-0689-00
	----- -----			(670-5693-00 ONLY)		
A16VR680	152-0744-00			SEMICOND DEVICE:ZEN,SI,3.6V,5%,0.4W	04713	1N747A
	----- -----			(670-5693-00 ONLY)		
A16W682	136-0566-00			BUS,CONDUCTOR:DUMMY RES,0.094 OD X 0.225		
	----- -----			(670-5693-00 ONLY)		
A16Y070	158-0177-00			XTAL UNIT,QTZ:4.0MHZ,0.001%,PARALLEL	33096	OBD

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A18	670-5692-00	B010100	B029999	CKT BOARD ASSY:VIDEO ACQUISITON MEMORY	80009	670-5692-00
A18	670-5692-01	B030000		CKT BOARD ASSY:VIDEO ACQUISITION MEMORY	80009	670-5692-01
A18C001	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C002	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A18C011	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C021	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C031	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C052	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C062	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C072	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C080	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A18C082	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C101	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C102	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C111	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C112	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C121	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C122	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C131	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C132	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C151	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C152	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C161	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C162	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C171	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C172	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C181	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C182	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C201	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C202	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C211	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C212	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C221	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C222	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C231	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C251	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C252	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C261	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C262	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C271	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C272	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C281	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C282	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C300	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A18C301	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C302	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C310	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A18C311	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C312	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C320	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A18C321	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C322	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C331	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C350	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A18C351	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C352	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C360	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A18C361	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C362	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C370	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A18C371	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C372	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C381	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C382	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C401	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C402	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C411	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C412	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C421	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C422	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C431	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C432	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C451	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C452	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C461	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C462	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C471	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C472	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C481	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C482	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C501	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C511	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C521	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C531	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C542	283-0423-00 ----- -----			CAP.,FXD,CER DI:0.22UF,+80-20%,50V (670-5692-00 ONLY)	04222	DG015E224Z
A18C552	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C562	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C572	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C582	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C621	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C650	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A18C651	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C661	283-0423-00			CAP.,FXD,CER DI:0.22UF,+80-20%,50V	04222	DG015E224Z
A18C671	283-0423-00 ----- -----			CAP.,FXD,CER DI:0.22UF,+80-20%,50V (670-5692-00 ONLY)	04222	DG015E224Z
A18F640	159-0059-00 ----- -----			FUSE,WIRE LEAD:5A,FAST-BLOW (670-5692-01 ONLY)	000HX	SP1-5A
A18P040	131-0608-00 ----- -----			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD (670-5692-01 ONLY)	22526	47357
A18P071	131-2405-00			CONN,RCPT,ELEC:CKT BD,2 X 25MALE	75037	3433-1202
A18P151	131-0608-00 ----- -----			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD (670-5692-01 ONLY)	22526	47357
A18P351	131-0608-00 ----- -----			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD (670-5692-01 ONLY)	22526	47357
A18P601	131-0608-00 ----- -----			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD (670-5692-01 ONLY)	22526	47357
A18P602	131-0608-00 ----- -----			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD (670-5692-01 ONLY)	22526	47357
A18R010	307-0540-01 ----- -----			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK (670-5692-00 ONLY)	80009	307-0540-01
A18R020	307-0540-01 ----- -----			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK (670-5692-00 ONLY)	80009	307-0540-01
A18R030	307-0650-01 ----- -----			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK (670-5692-01 ONLY)	80009	307-0650-01

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A18R060	307-0540-01			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK	80009	307-0540-01
	----- -----			(670-5692-00 ONLY)		
A18R080	307-0540-01			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK	80009	307-0540-01
	----- -----			(670-5692-00 ONLY)		
A18R130	307-0540-01			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK	80009	307-0540-01
	----- -----			(670-5692-00 ONLY)		
A18R131	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R132	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R133	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R141	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R142	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R143	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R144	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R145	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R146	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R147	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R230	307-0540-01			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK	80009	307-0540-01
	----- -----			(670-5692-00 ONLY)		
A18R231	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R232	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R233	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R330	307-0540-01			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK	80009	307-0540-01
	----- -----			(670-5692-00 ONLY)		
A18R331	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R332	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R333	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R430	307-0540-01			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK	80009	307-0540-01
	----- -----			(670-5692-00 ONLY)		
A18R431	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R432	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R433	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R441	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R442	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R443	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R444	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R445	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R446	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R447	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A18R543	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
	----- -----			(670-5692-00 ONLY)		
A18R601	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
	----- -----			(670-5692-01 ONLY)		
A18R602	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
	----- -----			(670-5692-01 ONLY)		
A18R620	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
	----- -----			(670-5692-00 ONLY)		
A18TP042	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
	----- -----			(670-5692-01 ONLY)		
A18TP043	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
	----- -----			(670-5692-01 ONLY)		
A18TP044	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
	----- -----			(670-5692-01 ONLY)		
A18TP045	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
	----- -----			(670-5692-01 ONLY)		
A18TP212	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A18TP262	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A18TP511	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A18TP561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A18TP641	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A18U001	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U002	156-1251-00 ----- -----			MICROCIRCUIT,DI:DUAL RANK 8 BIT SHFT,RGSTR (670-5692-00 ONLY)	80009	156-1251-00
A18U002	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U011	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U012	156-1251-00 ----- -----			MICROCIRCUIT,DI:DUAL RANK 8 BIT SHFT,RGSTR (670-5692-00 ONLY)	80009	156-1251-00
A18U012	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U021	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U022	156-1251-00 ----- -----			MICROCIRCUIT,DI:DUAL RANK 8 BIT SHFT,RGSTR (670-5692-00 ONLY)	80009	156-1251-00
A18U022	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHFIT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U031	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U032	156-1251-00 ----- -----			MICROCIRCUIT,DI:DUAL RANK 8 BIT SHFT,RGSTR (670-5692-00 ONLY)	80009	156-1251-00
A18U032	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U041	156-1058-01 ----- -----			MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT (670-5692-01 ONLY)	01295	SN74S240JP4
A18U042	156-0323-02 ----- -----			MICROCIRCUIT,DI:HEX INVERTER,BURN-IN (670-5692-00 ONLY)	01295	SN74S04
A18U043	156-1216-01 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND BFR,SCRN (670-5692-00 ONLY)	01295	SN74S37JP4
A18U043	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (670-5692-01 ONLY)	01295	SN74S241 JP4
A18U051	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U052	156-1251-00 ----- -----			MICROCIRCUIT,DI:DUAL RANK 8 BIT SHFT,RGSTR (670-5692-00 ONLY)	80009	156-1251-00
A18U052	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U061	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U062	156-1251-00 ----- -----			MICROCIRCUIT,DI:DUAL RANK 8 BIT SHFT,RGSTR (670-5692-00 ONLY)	80009	156-1251-00
A18U062	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U071	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED)	80009	156-0975-03
A18U072	156-1251-00 ----- -----			MICROCIRCUIT,DI:DUAL RANK 8 BIT SHFT,RGSTR (670-5692-00 ONLY)	80009	156-1251-00
A18U072	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U081	156-0975-03 ----- -----			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER (SCREENED, 670-5692-01 ONLY)	80009	156-0975-03
A18U082	156-1251-00 ----- -----			MICROCIRCUIT,DI:DUAL RANK 8 BIT SHFT,RGSTR (670-5692-00 ONLY)	80009	156-1251-00

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A18U082	156-0975-03			MICROCIRCUIT,DI:UNIV SHIFT/STORAGE REGISTER	80009	156-0975-03
	----- -----			(SCREENED, 670-5692-01 ONLY)		
A18U101	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U102	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U111	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U112	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U121	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U122	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U131	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U132	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U151	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U152	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U161	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U162	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U171	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U172	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U181	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U182	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U201	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U202	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U211	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U212	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U221	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U222	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U231	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U232	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U241	156-1179-01			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT	01295	SN74S241 JP4
	----- -----			(SCREENED)		
A18U242	156-1058-01			MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT	01295	SN74S240JP4
	----- -----			(SCREENED)		
A18U251	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U252	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U261	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U262	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U271	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U272	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U281	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U282	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U301	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U302	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U311	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U312	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U321	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U322	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U331	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U332	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U341	156-0914-02			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT	01295	SN74LS240
	----- -----			(SCREENED)		
A18U342	156-1058-01			MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT	01295	SN74S240JP4
	----- -----			(SCREENED)		
A18U351	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U352	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U361	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U362	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U371	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U372	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U381	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A18U382	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U401	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U402	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U411	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U412	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U421	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U422	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U431	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U432	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U441	156-0914-02 ----- -----			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT (SCREENED)	01295	SN74LS240
A18U451	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U452	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U461	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U462	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U471	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U472	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U481	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U482	156-1027-01			MICROCIRCUIT,DI:4096 X 1 DYNAMIC RAM,SEL	80009	156-1027-01
A18U501	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U502	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U511	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U512	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U521	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U522	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U531	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U532	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U541	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A18U542	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN, 670-5692-00 ONLY)	01295	SN74S00NP3
A18U551	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U552	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U561	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U562	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U571	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U572	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U581	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U582	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A18U602	156-1058-01 ----- -----			MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT (SCREENED)	01295	SN74S240JP4
A18U611	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A18U621	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A18U622	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A18U651	156-0966-01 ----- -----			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES (SCREENED)	80009	156-0966-01
A18U652	156-0966-01 ----- -----			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES (SCREENED)	80009	156-0966-01
A18U661	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A18U662	156-0966-01 ----- -----			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES (SCREENED, 670-5692-00 ONLY)	80009	156-0966-01
A18U662	156-0690-03 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN (670-5692-00 ONLY)	01295	SN74S02
A18U671	156-0718-03 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE (SCREENED, 670-5692-00 ONLY)	01295	SN74LS27
A18U672	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN)	01295	SN74S00NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A20	670-5694-00	B010100	B029999	CKT BOARD ASSY:VIDEO ACQ MEMORY CONTROLLER	80009	670-5694-00
A20	670-5694-01	B030000		CKT BOARD ASSY:VIDEO ACQ MEMORY CONTROLLER	80009	670-5694-01
A20C001	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C011	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C012	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C021	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C031	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C071	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C101	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C132	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C151	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C216	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C261	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C262	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C271	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C342	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C354	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C363	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C371	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C372	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C412	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C431	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C441	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C452	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C462	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C552	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20C571	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A20CR510	152-0574-00			SEMICOND DEVICE:SILICON,120V,0.15A	14433	WG1308
A20CR511	152-0574-00			SEMICOND DEVICE:SILICON,120V,0.15A	14433	WG1308
A20P003	131-1465-01			CONN,RCPT,ELEC:CKT BD,34 CONTACT,W/EJECTOR		
A20P005	131-2405-00			CONN,RCPT,ELEC:CKT BD,2 X 25 MALE	75037	3433-1202
A20P011	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P012	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P014	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P101	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P161	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P172	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P203	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P263	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P264	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P365	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P373	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P462	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20P470	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20Q520	151-0188-00			TRANSISTOR:SILICON,PNP	04713	SPS6868K
A20Q521	151-0188-00			TRANSISTOR:SILICON,PNP	04713	SPS6868K
A20R011	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R012	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A20R022	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R023	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R024	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R025	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R026	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R027	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R028	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R029	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R030	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R031	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R032	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R033	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R035	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R036	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R037	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R038	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R039	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R040	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R041	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R042	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R043	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R044	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R045	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R046	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R047	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R048	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A20R049	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R050	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R051	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R052	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A20R053	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R061	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R111	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R131	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R152	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R155	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R161	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R201	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R211	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R255	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R355	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R361	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R365	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R366	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R472	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R512	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A20R513	315-0241-00			RES.,FXD,CMPSN:240 OHM,5%,0.25W	01121	CB2415
A20R514	321-0231-00			RES.,FXD,FILM:2.49K OHM,1%,0.125W	91637	MFF1816G24900F
A20R515	321-0231-00			RES.,FXD,FILM:2.49K OHM,1%,0.125W	91637	MFF1816G24900F
A20R521	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R541	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R561	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A20R660	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R661	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R662	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R663	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R664	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A20R665	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R666	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R667	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R668	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R669	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R670	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R671	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R672	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R673	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R674	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R675	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R676	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R677	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R678	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20R679	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A20TP001	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
A20TP010	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
A20TP171	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20TP231	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20TP511	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A20U001	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN)	01295	SN74S00NP3
A20U011	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A20U012	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
A20U021	156-0316-04 ----- -----			MICROCIRCUIT,DI:QUAD ECL TO TTL TRANS (SCREENED)	80009	156-0316-04
A20U031	156-0316-04 ----- -----			MICROCIRCUIT,DI:QUAD ECL TO TTL TRANS (SCREENED)	80009	156-0316-04
A20U041	156-0316-04 ----- -----			MICROCIRCUIT,DI:QUAD ECL TO TTL TRANS (SCREENED)	80009	156-0316-04
A20U051	156-1058-01 ----- -----			MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT (SCREENED)	01295	SN74S240JP4
A20U061	156-0914-02 ----- -----			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT (SCREENED)	01295	SN74LS240
A20U071	156-0914-02 ----- -----			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT (SCREENED)	01295	SN74LS240
A20U101	156-1046-02 ----- -----			MICROCIRCUIT,DI:OCTAL D TYPE EDGE TRIG FF (BURN-IN)	80009	156-1046-02
A20U111	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A20U112	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN)	01295	SN74S00NP3
A20U121	160-0392-00			MICROCIRCUIT,DI:32 X 8 PROM,PRGM	80009	160-0392-00
A20U131	160-0391-00			MICROCIRCUIT,DI:32 X 8 PROM,PRGM	80009	160-0391-00
A20U132	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U141	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U151	156-1058-01 ----- -----			MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT (SCREENED)	01295	SN74S240JP4
A20U161	156-1054-01 ----- -----			MICROCIRCUIT,DI:PROGRAMMABLE BINARY CNTR (SCREENED)	27014	DM8556
A20U162	156-1054-01 ----- -----			MICROCIRCUIT,DI:PROGRAMMABLE BINARY CNTR (SCREENED)	27014	DM8556
A20U171	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN)	01295	SN74S00NP3
A20U201	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A20U211	156-1216-01			MICROCIRCUIT,DI:QUAD 2-INP NAND BFR,SCRN	01295	SN74S37JP4

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A20U216	156-0472-03			MICROCIRCUIT,DI:13-INPUT NAND GATE,SCRN	01295	SN74S133
A20U221	160-0403-00			MICROCIRCUIT,DI:FPLA,PROGRAMMED	80009	160-0403-00
A20U231	160-0394-00			MICROCIRCUIT,DI:32 X 8 PROM,PRGM	80009	160-0394-00
A20U232	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U241	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U251	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U261	156-0321-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S10
A20U262	156-0321-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S10
A20U271	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A20U301	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U312	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U313	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U321	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U331	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U332	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U333	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U341	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U342	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U351	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U352	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U353	156-0718-03 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE (SCREENED)	01295	SN74LS27
A20U354	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U361	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A20U362	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
A20U363	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A20U364	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
A20U371	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A20U372	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
A20U401	156-0599-01			MICROCIRCUIT,DI:RAM,THREE STATE,BURN-IN	27014	DM 74LS189 JA+
A20U411	156-0599-01			MICROCIRCUIT,DI:RAM,THREE STATE,BURN-IN	27014	DM 74LS189 JA+
A20U412	156-0599-01			MICROCIRCUIT,DI:RAM,THREE STATE,BURN-IN	27014	DM 74LS189 JA+
A20U421	156-0599-01			MICROCIRCUIT,DI:RAM,THREE STATE,BURN-IN	27014	DM 74LS189 JA+
A20U431	156-0599-01			MICROCIRCUIT,DI:RAM,THREE STATE,BURN-IN	27014	DM 74LS189 JA+
A20U432	156-0599-01			MICROCIRCUIT,DI:RAM,THREE STATE,BURN-IN	27014	DM 74LS189 JA+
A20U441	156-0599-01			MICROCIRCUIT,DI:RAM,THREE STATE,BURN-IN	27014	DM 74LS189 JA+
A20U451	156-0599-01			MICROCIRCUIT,DI:RAM,THREE STATE,BURN-IN	27014	DM 74LS189 JA+
A20U452	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A20U461	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN AND RELIABILITY)	01295	SN74LS00

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A20U462	156-0383-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE (SCREENED)	01295	SN74LS02
A20U471	156-0464-02 ----- -----			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE (SCREENED)	01295	SN74LS20
A20U511	156-0470-02 ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED)	01295	SN74LS251
A20U531	156-0874-02			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH	80009	156-0874-02
A20U532	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U541	156-0953-02 ----- -----			MICROCIRCUIT,DI:4 BIT MAGNITUDE CMPRTR (SCREENED)	01295	SN74LS85
A20U551	156-1064-02 ----- -----			MICROCIRCUIT,DI:QUAD 2/1 LINETRUE DATA (BURN-IN)	01295	SN74S157JP4
A20U552	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A20U561	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (SCREENED)	01295	SN74LS00
A20U562	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A20U571	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A22	670-5697-00			CKT BOARD ASSY:DIGITAL FEEDBACK	80009	670-5697-00
A22C019	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C028	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C037	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C046	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C055	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C064	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C073	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C082	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C091	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C099	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C110	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C119	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C128	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C137	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C146	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C155	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C164	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C173	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C182	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C191	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C199	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C210	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C219	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C228	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C237	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C246	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C255	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C264	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C273	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C282	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C291	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C299	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C310	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C319	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C328	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C337	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C346	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C355	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C364	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C373	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C382	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C391	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C399	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C410	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C419	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C428	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C437	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C446	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C455	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C464	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C473	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C482	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C491	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C499	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C501	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A22C510	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C519	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C528	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C537	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C546	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C555	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C564	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C573	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C582	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C591	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A22C646	290-0748-00			CAP.,FXD,ELCTLT:10UF,+50-10%,20V	56289	500D149
A22P073	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A22P099	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A22P538	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A22P539	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A22P540	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A22P601	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A22R091	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R110	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R128	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R137	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R155	315-0751-00			RES.,FXD,CMPSN:750 OHM,5%,0.25W	01121	CB7515
A22R164	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R182	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R183	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R282	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R299	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R310	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R328	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R337	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R382	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R401	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R428	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R446	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R537	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R538	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A22R539	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A22R540	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A22R541	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A22R542	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A22R543	315-0161-00			RES.,FXD,CMPSN:160 OHM,5%,0.25W	01121	CB1615
A22R555	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R570	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A22R573	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A22R580	307-0648-00			RES,NTWK,FXD,FI:8,100 OHM,2%,0.125W	01121	316B101
A22R601	315-0390-00			RES.,FXD,CMPSN:39 OHM,5%,0.25W	01121	CB3905
A22TP028	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
A22TP091	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
A22U019	156-1298-00			MICROCIRCUIT,DI:256 X 4 STATIC RAM 3 STATE	80009	156-1298-00
A22U028	156-1298-00			MICROCIRCUIT,DI:256 X 4 STATIC RAM 3 STATE	80009	156-1298-00
A22U037	156-0913-02 ----- -----			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U046	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U055	156-0652-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT EXCL NOR GATE (SCREENED)	01295	SN74LS266
A22U064	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+

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A22U073	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN & RELIABILITY)	01295	SN74LS00
A22U082	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A22U091	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A22U099	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN & RELIABILITY)	01295	SN74LS00
A22U110	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN & RELIABILITY)	01295	SN74LS00
A22U119	156-1298-00			MICROCIRCUIT,DI:256 X 4 STATIC RAM 3 STATE	80009	156-1298-00
A22U128	156-1298-00			MICROCIRCUIT,DI:256 X 4 STATIC RAM 3 STATE	80009	156-1298-00
A22U137	156-0913-02 ----- -----			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U146	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U155	156-0652-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT EXCL NOR GATE (SCREENED)	01295	SN74LS266
A22U164	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A22U173	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A22U182	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN)	01295	SN74S00NP3
A22U191	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U199	156-0368-03 ----- -----			MICROCIRCUIT,DI:TTL TO ECL QUAD TRANS (SCREENED)	80009	156-0368-03
A22U201	160-0393-00 ----- -----			MICROCIRCUIT,DI:32 X 8 PROM,PRGM (5610)	80009	160-0393-00
A22U210	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN & RELIABILITY)	01295	SN74LS00
A22U219	156-1298-00			MICROCIRCUIT,DI:256 X 4 STATIC RAM 3 STATE	80009	156-1298-00
A22U228	156-1298-00			MICROCIRCUIT,DI:256 X 4 STATIC RAM 3 STATE	80009	156-1298-00
A22U237	156-0913-02 ----- -----			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U246	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U255	156-0652-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT EXCL NOR GATE (SCREENED)	01295	SN74LS266
A22U264	156-0784-02 ----- -----			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A22U273	156-0383-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE (SCREENED)	01295	SN74LS02
A22U282	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A22U291	156-0913-02 ----- -----			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U299	156-0368-03 ----- -----			MICROCIRCUIT,DI:TTL TO ECL QUAD TRANS (SCREENED)	80009	156-0368-03
A22U310	156-0383-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE (SCREENED)	01295	SN74LS02
A22U319	156-1298-00			MICROCIRCUIT,DI:256 X 4 STATIC RAM 3 STATE	80009	156-1298-00
A22U328	156-1298-00			MICROCIRCUIT,DI:256 X 4 STATIC RAM 3 STATE	80009	156-1298-00
A22U337	156-0913-02 ----- -----			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U346	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U355	156-0652-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT EXCL NOR GATE (SCREENED)	01295	SN74LS266

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A22U364	156-0784-02			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A22U373	156-0913-02			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U382	156-0913-02			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U391	156-0913-02			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U399	156-0368-03			MICROCIRCUIT,DI:TTL TO ECL QUAD TRANS (SCREENED)	80009	156-0368-03
A22U401	156-0784-02			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A22U410	156-0784-02			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A22U419	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A22U428	156-0465-02			MICROCIRCUIT,DI:8-INP NAND GATE (SCREENED)	01295	SN74LS30NP3
A22U437	156-1216-01			MICROCIRCUIT,DI:QUAD 2-INP NAND BFR,SCRN	01295	SN74S37JP4
A22U446	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
A22U455	156-0652-02			MICROCIRCUIT,DI:QUAD 2-INPUT EXCL NOR GATE (SCREENED)	01295	SN74LS266
A22U464	156-0784-02			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER (SCREENED)	27014	DM74LS163ANA+
A22U473	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U482	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U491	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U499	156-0913-02			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U501	156-0955-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	04713	SN74LS241
A22U510	156-0955-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	04713	SN74LS241
A22U519	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U528	156-0914-02			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT (SCREENED)	01295	SN74LS240
A22U537	156-0316-04			MICROCIRCUIT,DI:QUAD ECL TO TTL TRANS (SCREENED)	80009	156-0316-04
A22U546	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN & RELIABILITY)	01295	SN74LS00
A22U555	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U564	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U573	156-0913-02			MICROCIRCUIT,DI:OCTAL D FF,BURN-IN (W/ENABLE,SCREENED)	04713	SN74LS377NDS
A22U582	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A22U591	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3

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A24	672-0777-00	B010100	B029999	CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0777-00
A24	672-0777-01	B030000	B030239	CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0777-01
A24	672-0777-02	B030240		CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0777-02
A24A1	672-0893-01	B010100	B030239	CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0893-01
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1	672-0893-02	B030240		CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	672-0893-02
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1	670-5695-02			CKT BOARD ASSY:VIDEO DATA CONVERTER	80009	670-5695-02
A24A1A1	672-0988-00			CKT BOARD ASSY:ADC ASSEMBLY	80009	672-0988-00
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1A2	670-5956-00	B010100	B029999	CKT BOARD ASSY:FILTER	80009	670-5956-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A2	670-7459-00	B030000		CKT BOARD ASSY:FILTER	80009	670-7459-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A3	670-5956-00			CKT BOARD ASSY:FILTER	80009	670-5956-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A4	670-5956-00	B010100	B029999	CKT BOARD ASSY:FILTER	80009	670-5956-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A4	670-7583-00	B030000		CKT BOARD ASSY:FILTER	80009	670-7583-00
	----- -----			(REPLACEABLE AS A UNIT ONLY)		
A24A1A5	670-7340-00	XB029999		CKT BOARD ASSY:TEMP C-N	80009	670-7340-00
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1A6	670-7339-00	XB029999		CKT BOARD ASSY:TEMP C-P	80009	670-7339-00
	----- -----			(REPLACEABLE AS A UNIT WITH A24)		
A24A1C011	290-0572-00			CAP.,FXD,ELCTLT:0.1UF,20%,50V	56289	196D104X0050HA1
A24A1C013	283-0598-00			CAP.,FXD,MICA D:253PF,5%,300V	09023	CD15EC(253)J03
A24A1C017	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C020	290-0536-00			CAP.,FXD,ELCTLT:10UF,20%,25V	90201	TDC106M025FL
A24A1C021	290-0534-00			CAP.,FXD,ELCTLT:1UF,20%,35V	56289	196D105X0035HA1
A24A1C022	283-0194-00			CAP.,FXD,CER DI:4.7UF,20%,50V	56289	5C37Z5U475M050B
A24A1C030	283-0598-00			CAP.,FXD,MICA D:253PF,5%,300V	09023	CD15EC(253)J03
A24A1C101	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C120	281-0759-00			CAP.,FXD,CER DI:22PF,10%,100V	72982	8035D9AADC1G220K
A24A1C130	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C131	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C160	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C200	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C230	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C260	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C361	283-0663-00			CAP.,FXD,MICA D:16.8PF,+/-0.5PF,500V	00853	D155C16R8D0
A24A1C375	281-0819-00			CAP.,FXD,CER DI:33PF,5%,50V	72982	8035BC0G330
A24A1C380	290-0517-00			CAP.,FXD,ELCTLT:6.8UF,20%,35V	56289	196D685X0035KA1
A24A1C383	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C410	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C411	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C430	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C461	281-0759-00			CAP.,FXD,CER DI:22PF,10%,100V	72982	8035D9AADC1G220K
A24A1C462	281-0617-00			CAP.,FXD,CER DI:15PF,10%,200V	59660	374-018-C0G0150K
A24A1C470	281-0091-00			CAP.,VAR,CER DI:2-8PF	59660	538-011 A2-8
A24A1C510	290-0573-00			CAP.,FXD,ELCTLT:2.7UF,20%,50V	56289	196D275X0050JA1
A24A1C530	283-0672-00			CAP.,FXD,MICA D:200PF,1%,500V	00853	D155F2010F0
A24A1C531	283-0666-00			CAP.,FXD,MICA D:890PF,2%,100V	00853	D151F891G0
A24A1C532	283-0771-00			CAP.,FXD,MICA D:334PF,1%,500V	00853	D15-5F3340F0
A24A1C540	281-0759-00			CAP.,FXD,CER DI:22PF,10%,100V	72982	8035D9AADC1G220K
A24A1C542	281-0091-00			CAP.,VAR,CER DI:2-8PF	59660	538-011 A2-8
A24A1C561	281-0814-00			CAP.,FXD,CER DI:100PF,10%,100V	04222	GC70-1-A101K
A24A1C570	290-0776-00			CAP.,FXD,ELCTLT:22UF,+50-10%,10V	55680	10ULA22V-T
A24A1C580	290-0536-00			CAP.,FXD,ELCTLT:10UF,20%,25V	90201	TDC106M025FL
A24A1C582	283-0776-00			CAP.,FXD,MICA D:2130PF,1%,500V	00853	D19-5F2131F0
A24A1C610	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A24A1C611	283-0080-00			CAP.,FXD,CER DI:0.022UF,+80-20%,25V	91418	MX223Z2504R0
A24A1C612	281-0772-00			CAP.,FXD,CER DI:0.0047UF,10%,100V	04222	GC701C472K
A24A1C613	283-0212-00			CAP.,FXD,CER DI:2UF,20%,50V	51642	400-050-Z5U205M
A24A1C620	283-0648-00			CAP.,FXD,MICA D:10PF,5%,100V	00853	D151C100D0
A24A1C630	290-0517-00			CAP.,FXD,ELCTLT:6.8UF,20%,35V	56289	196D685X0035KA1
A24A1C640	281-0809-00			CAP.,FXD,CER DI:200PF,5%,100V	72982	8013T2ADDC1G201J
A24A1C651	281-0809-00			CAP.,FXD,CER DI:200PF,5%,100V	72982	8013T2ADDC1G201J
A24A1C660	283-0649-00			CAP.,FXD,MICA D:105PF,1%,300V	00853	D153F1050F0
A24A1C661	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A24A1C665	283-0065-00			CAP.,FXD,CER DI:0.001UF,5%,100V	59660	0835-591-Y5E0102
A24A1C672	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C680	285-1098-00			CAP.,FXD,PLSTC:0.22UF,10%,80V	56289	192P2249R8
A24A1C702	283-0637-00			CAP.,FXD,MICA D:20PF,2.5%,100V	00853	D151E200D0
A24A1C704	283-0637-00			CAP.,FXD,MICA D:20PF,2.5%,100V	00853	D151E200D0
A24A1C706	283-0671-00			CAP.,FXD,MICA D:164PF,1%,500V	00853	D155F1640F0
A24A1C729	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C730	281-0809-00			CAP.,FXD,CER DI:200PF,5%,100V	72982	8013T2ADDC1G201J
A24A1C741	281-0809-00			CAP.,FXD,CER DI:200PF,5%,100V	72982	8013T2ADDC1G201J
A24A1C750	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C760	290-0517-00			CAP.,FXD,ELCTLT:6.8UF,20%,35V	56289	196D685X0035KA1
A24A1C762	283-0632-00			CAP.,FXD,MICA D:87PF,1%,100V	00853	D151E870F0
A24A1C770	283-0649-00			CAP.,FXD,MICA D:105PF,1%,300V	00853	D153F1050F0
A24A1C801	283-0784-00			CAP.,FXD,MICA D:40 PF,2%,500V	09023	CD15ED400G03
A24A1C802	283-0784-00			CAP.,FXD,MICA D:40 PF,2%,500V	09023	CD15ED400G03
A24A1C810	283-0671-00			CAP.,FXD,MICA D:164PF,1%,500V	00853	D155F1640F0
A24A1C811	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C821	285-0598-00			CAP.,FXD,PLSTC:0.01UF,5%,100V	19396	DU490B103J
A24A1C840	281-0809-00			CAP.,FXD,CER DI:200PF,5%,100V	72982	8013T2ADDC1G201J
A24A1C850	281-0809-00			CAP.,FXD,CER DI:200PF,5%,100V	72982	8013T2ADDC1G201J
A24A1C861	281-0609-00			CAP.,FXD,CER DI:1PF,+/-0.1PF,500V	59660	374-018C0K0109B
A24A1C865	281-0811-00			CAP.,FXD,CER DI:10PF,10%,100V	72982	8035D2AADC1G100K
A24A1C871	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C875	281-0797-00			CAP.,FXD,CER DI:15PF,10%,100V	72982	8035D9AADC0G150K
A24A1C880	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C881	281-0811-00			CAP.,FXD,CER DI:10PF,10%,100V	72982	8035D2AADC1G100K
A24A1C882	281-0811-00			CAP.,FXD,CER DI:10PF,10%,100V	72982	8035D2AADC1G100K
A24A1C884	281-0785-00			CAP.,FXD,CER DI:68PF,10%,100V	72982	8035D2AADC0G680K
A24A1C886	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C903	283-0637-00			CAP.,FXD,MICA D:20PF,2.5%,100V	00853	D151E200D0
A24A1C905	283-0637-00			CAP.,FXD,MICA D:20PF,2.5%,100V	00853	D151E200D0
A24A1C920	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C930	281-0809-00			CAP.,FXD,CER DI:200PF,5%,100V	72982	8013T2ADDC1G201J
A24A1C940	281-0809-00			CAP.,FXD,CER DI:200PF,5%,100V	72982	8013T2ADDC1G201J
A24A1C960	281-0819-00			CAP.,FXD,CER DI:33PF,5%,50V	72982	8035BC0G330
A24A1C961	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C970	281-0759-00			CAP.,FXD,CER DI:22PF,10%,100V	72982	8035D9AADC1G220K
A24A1C971	290-0770-00			CAP.,FXD,ELCTLT:100UF,+50-10%,25V	56289	502D230
A24A1C980	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C990	281-0759-00			CAP.,FXD,CER DI:22PF,10%,100V	72982	8035D9AADC1G220K
A24A1C1002	281-0815-00			CAP.,FXD,CER DI:0.027UF,20%,50V	72982	8005D9AABW5R273M
A24A1C1060	290-0770-00			CAP.,FXD,ELCTLT:100UF,+50-10%,25V	56289	502D230
A24A1C1061	290-0770-00			CAP.,FXD,ELCTLT:100UF,+50-10%,25V	56289	502D230
A24A1C5100	290-0770-00			CAP.,FXD,ELCTLT:100UF,+50-10%,25V	56289	502D230
A24A1C6102	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A24A1C6103	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A24A1CR120	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR121	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R

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A24A1CR372	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR373	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR440	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR441	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR450	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR460	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR461	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR475	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR510	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR554	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR560	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR561	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR562	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR582	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR620	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR630	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR631	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR640	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR641	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR670	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR671	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR672	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR700	152-0650-00			SEMICOND DEVICE:VVC,11.5PF NOM -3V,30 PIV	04713	BB105B
A24A1CR710	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR741	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR742	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR750	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR751	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR830	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR831	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR840	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR841	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR860	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR861	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR874	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR880	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR901	152-0650-00			SEMICOND DEVICE:VVC,11.5PF NOM -3V,30 PIV	04713	BB105B
A24A1CR940	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR941	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR950	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR951	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR952	152-0066-00			SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A24A1CR961	152-0066-00			SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A24A1CR970	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR971	152-0066-00			SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A24A1CR980	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR981	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR990	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR1000	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR1004	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A24A1CR5100	152-0066-00			SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A24A1L030	108-0317-00			COIL,RF:FIXED,15UH	32159	71501M
A24A1L381	108-0317-00			COIL,RF:FIXED,15UH	32159	71501M
A24A1L531	114-0222-00			COIL,RF:2-6UH,CORE 276-0568-00	80009	114-0222-00
A24A1L532	114-0222-00			COIL,RF:2-6UH,CORE 276-0568-00	80009	114-0222-00
A24A1L710	108-1109-00			COIL,RF:FIXED,850NH	80009	108-1109-00
A24A1L711	108-1109-00			COIL,RF:FIXED,850NH	80009	108-1109-00

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A24A1L760	114-0343-00			COIL,RF:200-400UH,CORE 276-0568-00	80009	114-0343-00
A24A1L810	108-1109-00			COIL,RF:FIXED,850NH	80009	108-1109-00
A24A1L910	108-1109-00			COIL,RF:FIXED,850NH	80009	108-1109-00
A24A1L971	108-0260-00			COIL,RF:98NH	80009	108-0260-00
A24A1L991	108-0260-00			COIL,RF:98NH	80009	108-0260-00
A24A1P010	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1P034	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1P036	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1P040	131-1465-01			CONN,RCPT,ELEC:CKT BOARD,34 CONTACT	75037	3431-1202
A24A1P480	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1P930	131-0591-00			CONTACT,ELEC:0.835 INCH LONG	22526	47352
A24A1P940	131-0591-00			CONTACT,ELEC:0.835 INCH LONG	22526	47352
A24A1P950	131-0591-00			CONTACT,ELEC:0.835 INCH LONG	22526	47352
A24A1Q381	151-0127-00			TRANSISTOR:SILICON,NPN	07263	S006075
A24A1Q440	151-0309-00			TRANSISTOR:SILICON,NPN,DUAL	80009	151-0309-00
A24A1Q450	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q460	151-0272-00			TRANSISTOR:SILICON,PNP	80009	151-0272-00
A24A1Q461	151-0427-00			TRANSISTOR:SILICON,NPN	80009	151-0427-00
A24A1Q462	151-0438-00	B010100	B010128	TRANSISTOR:SILICON,PNP,SEL FROM SPS6927	80009	151-0438-00
A24A1Q462	151-0712-00	B010129		TRANSISTOR:SILICON,NPN	04713	SPS8223
A24A1Q463	151-0127-00			TRANSISTOR:SILICON,NPN	07263	S006075
A24A1Q464	151-0127-00			TRANSISTOR:SILICON,NPN	07263	S006075
A24A1Q470	151-0309-00			TRANSISTOR:SILICON,NPN,DUAL	80009	151-0309-00
A24A1Q471	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q540	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q541	151-0127-00			TRANSISTOR:SILICON,NPN	07263	S006075
A24A1Q550	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q560	151-0272-00			TRANSISTOR:SILICON,PNP	80009	151-0272-00
A24A1Q610	151-0261-00			TRANSISTOR:SILICON,PNP,DUAL	04713	SD441
A24A1Q630	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q631	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q660	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q661	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q662	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q670	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q680	151-1022-00			TRANSISTOR:FET,N-CHAN,SI,F1782,TO-18	17856	FN1234
A24A1Q681	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q720	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q730	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q731	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q740	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q741	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q760	151-1022-00			TRANSISTOR:FET,N-CHAN,SI,F1782,TO-18	17856	FN1234
A24A1Q761	151-0302-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0302-01
A24A1Q762	151-0302-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0302-01
A24A1Q770	151-1022-00			TRANSISTOR:FET,N-CHAN,SI,F1782,TO-18	17856	FN1234
A24A1Q771	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q772	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q780	151-0302-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0302-01
A24A1Q781	151-0302-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0302-01
A24A1Q782	151-0302-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0302-01
A24A1Q790	151-0302-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0302-01
A24A1Q791	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q830	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q831	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q850	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q851	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01

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A24A1Q860	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q861	151-0127-00			TRANSISTOR:SILICON,NPN	07263	S006075
A24A1Q862	151-0309-00			TRANSISTOR:SILICON,NPN,DUAL	80009	151-0309-00
A24A1Q870	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q880	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q901	151-0302-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0302-01
A24A1Q902	151-0302-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0302-01
A24A1Q930	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q931	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q940	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q941	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q980	151-0459-01			TRANSISTOR:SILICON,PNP	80009	151-0459-01
A24A1Q1080	151-0301-02			TRANSISTOR:SILICON,PNP	04713	2N2907A
A24A1Q5100	151-0103-02			TRANSISTOR:SILICON,NPN,SEL	04713	OBD
A24A1R010	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R011	315-0623-00			RES.,FXD,CMPSN:62K OHM,5%,0.25W	01121	CB6235
A24A1R012	315-0162-00			RES.,FXD,CMPSN:1.6K OHM,5%,0.25W	01121	CB1625
A24A1R013	315-0163-00			RES.,FXD,CMPSN:16K OHM,5%,0.25W	01121	CB1635
A24A1R014	315-0754-00			RES.,FXD,CMPSN:750K OHM,5%,0.25W	01121	CB7545
A24A1R015	311-1269-00			RES.,VAR,NONWIR:20K OHM,10%,0.50W	32997	3329P-L58-203
A24A1R016	315-0220-00			RES.,FXD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
A24A1R021	315-0305-00			RES.,FXD,CMPSN:3M OHM,5%,0.25W	01121	CB3055
A24A1R030	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
A24A1R090	307-0503-01			RES NTWK,FXD,FI:(9)510 OHM,20%,0.15W	80009	307-0503-01
A24A1R121	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R170	307-0539-01			RES NTWK,FXD,FI:(7)510 OHM,10%,0.15W	80009	307-0539-01
A24A1R280	321-0085-00			RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
A24A1R360	311-1263-00			RES.,VAR,NONWIR:1K OHM,10%,0.50W	32997	3329P-L58-102
A24A1R361	315-0152-00			RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A24A1R362	315-0112-00			RES.,FXD,CMPSN:1.1K OHM,5%,0.25W	01121	CB1125
A24A1R370	321-0132-00			RES.,FXD,FILM:232 OHM,1%,0.125W	91637	MFF1816G232R0F
A24A1R371	321-0132-00			RES.,FXD,FILM:232 OHM,1%,0.125W	91637	MFF1816G232R0F
A24A1R372	321-0193-00			RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A24A1R373	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
A24A1R375	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A24A1R376	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A24A1R380	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A24A1R382	301-0121-00			RES.,FXD,CMPSN:120 OHM,5%,0.50W	01121	EB1215
A24A1R401	307-0541-01			RES NTWK,FXD,FI:(7)1K OHM,10%,0.125W	80009	307-0541-01
A24A1R441	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
A24A1R442	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R443	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A24A1R444	315-0152-00			RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A24A1R445	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A24A1R450	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R451	315-0123-00			RES.,FXD,CMPSN:12K OHM,5%,0.25W	01121	CB1235
A24A1R452	315-0123-00			RES.,FXD,CMPSN:12K OHM,5%,0.25W	01121	CB1235
A24A1R453	315-0823-00			RES.,FXD,CMPSN:82K OHM,5%,0.25W	01121	CB8235
A24A1R460	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R461	321-0161-00			RES.,FXD,FILM:464 OHM,1%,0.125W	91637	MFF1816G464R0F
A24A1R462	315-0114-00			RES.,FXD,CMPSN:110K OHM,5%,0.25W	01121	CB1145
A24A1R463	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A24A1R465	321-0609-07			RES.,FXD,FILM:480 OHM,0.1%,0.125W	91637	MFF1816C480R0B
A24A1R470	315-0392-00			RES.,FXD,CMPSN:3.9K OHM,5%,0.25W	01121	CB3925
A24A1R471	321-0162-00			RES.,FXD,FILM:475 OHM,1%,0.125W	91637	MFF1816G475R0F
A24A1R472	321-0383-00			RES.,FXD,FILM:95.3K OHM,1%,0.125W	91637	MFF1816G95301F
A24A1R473	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015

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A24A1R474	321-0220-00			RES.,FXD,FILM:1.91K OHM,1%,0.125W	91637	MFF1816G19100F
A24A1R475	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A24A1R476	315-0301-00			RES.,FXD,CMPSN:300 OHM,5%,0.25W	01121	CB3015
A24A1R477	315-0912-00			RES.,FXD,CMPSN:9.1K OHM,5%,0.25W	01121	CB9125
A24A1R480	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A24A1R481	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A24A1R482	315-0152-00			RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A24A1R483	321-0220-00			RES.,FXD,FILM:1.91K OHM,1%,0.125W	91637	MFF1816G19100F
A24A1R484	307-0503-01			RES NTWK,FXD,FI:(9)510 OHM,20%,0.15W	80009	307-0503-01
A24A1R485	311-1263-00			RES.,VAR,NONWIR:1K OHM,10%,0.50W	32997	3329P-L58-102
A24A1R486	315-0241-00			RES.,FXD,CMPSN:240 OHM,5%,0.25W	01121	CB2415
A24A1R510	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A24A1R511	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A24A1R512	321-0097-00			RES.,FXD,FILM:100 OHM,1%,0.125W	91637	MFF1816G100R0F
A24A1R513	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A24A1R514	321-0097-00			RES.,FXD,FILM:100 OHM,1%,0.125W	91637	MFF1816G100R0F
A24A1R515	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A24A1R516	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A24A1R517	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A24A1R532	321-0078-00			RES.,FXD,FILM:63.4 OHM,1%,0.125W	91637	MFF1816G63R40F
A24A1R541	315-0301-00			RES.,FXD,CMPSN:300 OHM,5%,0.25W	01121	CB3015
A24A1R542	321-0207-00			RES.,FXD,FILM:1.4K OHM,1%,0.125W	91637	MFF1816G14000F
A24A1R543	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R546	321-0321-00			RES.,FXD,FILM:21.5K OHM,1%,0.125W	91637	MFF1816G21501F
A24A1R550	315-0683-00			RES.,FXD,CMPSN:68K OHM,5%,0.25W	01121	CB6835
A24A1R551	321-0198-00			RES.,FXD,FILM:1.13K OHM,1%,0.125W	91637	MFF1816G11300F
A24A1R552	321-0193-00			RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A24A1R553	321-0162-00			RES.,FXD,FILM:475 OHM,1%,0.125W	91637	MFF1816G475R0F
A24A1R554	315-0432-00			RES.,FXD,CMPSN:4.3K OHM,5%,0.25W	01121	CB4325
A24A1R555	321-0178-00			RES.,FXD,FILM:698 OHM,1%,0.125W	91637	MFF1816G698R0F
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A24A1R560	321-0213-00			RES.,FXD,FILM:1.62K OHM,1%,0.125W	91637	MFF1816G16200F
A24A1R561	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A24A1R562	321-0213-00			RES.,FXD,FILM:1.62K OHM,1%,0.125W	91637	MFF1816G16200F
A24A1R563	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A24A1R571	315-0912-00			RES.,FXD,CMPSN:9.1K OHM,5%,0.25W	01121	CB9125
A24A1R580	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A24A1R581	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
A24A1R582	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A24A1R583	321-0609-07			RES.,FXD,FILM:480 OHM,0.1%,0.125W	91637	MFF1816C480R0B
A24A1R590	315-0150-00			RES.,FXD,CMPSN:15 OHM,5%,0.25W	01121	CB1505
A24A1R610	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
A24A1R612	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R613	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R620	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A24A1R621	307-0541-01			RES NTWK,FXD,FI:(7)1K OHM,10%,0.125W	80009	307-0541-01
A24A1R630	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R631	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R632	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R633	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R634	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A24A1R640	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A24A1R641	315-0270-00			RES.,FXD,CMPSN:27 OHM,5%,0.25W	01121	CB2705
A24A1R642	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A24A1R643	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A24A1R644	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R645	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735

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A24A1R646	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R647	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A24A1R648	311-1272-00			RES.,VAR,NONWIR:100K OHM,10%,0.50W	32997	3329P-L58-104
A24A1R650	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R651	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A24A1R652	315-0270-00			RES.,FXD,CMPSN:27 OHM,5%,0.25W	01121	CB2705
A24A1R660	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
A24A1R661	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
A24A1R662	315-0333-00			RES.,FXD,CMPSN:33K OHM,5%,0.25W	01121	CB3335
A24A1R663	315-0223-00			RES.,FXD,CMPSN:22K OHM,5%,0.25W	01121	CB2235
A24A1R664	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A24A1R665	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A24A1R666	321-0239-00			RES.,FXD,FILM:3.01K OHM,1%,0.125W	91637	MFF1816G30100F
A24A1R670	321-0397-00			RES.,FXD,FILM:133K OHM,1%,0.125W	91637	MFF1816G13302F
A24A1R671	321-0394-00			RES.,FXD,FILM:124K OHM,1%,0.125W	91637	MFF1816G12402F
A24A1R672	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
A24A1R673	315-0202-00			RES.,FXD,CMPSN:2K OHM,5%,0.25W	01121	CB2025
A24A1R674	323-0128-00			RES.,FXD,FILM:210 OHM,1%,0.50W	75042	CECTO-2100F
A24A1R680	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A24A1R681	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
A24A1R690	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
A24A1R700	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R701	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
A24A1R702	315-0153-00			RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
A24A1R703	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R704	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R705	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R706	307-0540-01			RES NTW,FXD,FI:(5)1K OHM,25%,0.15W EA,CHK	80009	307-0540-01
A24A1R711	315-0751-00			RES.,FXD,CMPSN:750 OHM,5%,0.25W	01121	CB7515
A24A1R720	321-0279-00			RES.,FXD,FILM:7.87K OHM,1%,0.125W	91637	MFF1816G78700F
A24A1R721	315-0154-00			RES.,FXD,CMPSN:150K OHM,5%,0.25W	01121	CB1545
A24A1R722	315-0113-00			RES.,FXD,CMPSN:11K OHM,5%,0.25W	01121	CB1135
A24A1R729	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A24A1R730	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A24A1R731	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A24A1R732	315-0270-00			RES.,FXD,CMPSN:27 OHM,5%,0.25W	01121	CB2705
A24A1R733	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R734	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R735	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R736	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R737	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R740	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R741	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A24A1R742	315-0270-00			RES.,FXD,CMPSN:27 OHM,5%,0.25W	01121	CB2705
A24A1R743	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R750	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R751	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R752	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R753	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R755	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R760	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A24A1R761	315-0822-00			RES.,FXD,CMPSN:8.2K OHM,5%,0.25W	01121	CB8225
A24A1R763	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A24A1R770	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A24A1R771	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A24A1R772	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A24A1R773	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815

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A24A1R780	315-0754-00			RES.,FXD,CMPSN:750K OHM,5%,0.25W	01121	CB7545
A24A1R781	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
A24A1R782	315-0223-00			RES.,FXD,CMPSN:22K OHM,5%,0.25W	01121	CB2235
A24A1R783	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R784	315-0223-00			RES.,FXD,CMPSN:22K OHM,5%,0.25W	01121	CB2235
A24A1R785	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R801	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R802	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R803	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R804	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R819	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R820	307-0465-00			RES.,FXD,FILM:10M OHM,1%,0.5W	03888	FL1/2 10M OHM 1%
A24A1R821	315-0754-00			RES.,FXD,CMPSN:750K OHM,5%,0.25W	01121	CB7545
A24A1R822	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R823	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R824	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R825	321-0097-00			RES.,FXD,FILM:100 OHM,1%,0.125W	91637	MFF1816G100R0F
A24A1R830	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R831	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R832	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R833	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R834	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R837	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A24A1R840	315-0270-00			RES.,FXD,CMPSN:27 OHM,5%,0.25W	01121	CB2705
A24A1R841	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R842	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R843	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R844	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R846	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R850	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R851	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A24A1R852	311-1260-00			RES.,VAR,NONWIR:250 OHM,10%,0.50W	32997	3329P-L58-251
A24A1R853	315-0270-00			RES.,FXD,CMPSN:27 OHM,5%,0.25W	01121	CB2705
A24A1R854	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R860	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A24A1R861	307-0106-00			RES.,FXD,CMPSN:4.7 OHM,5%,0.25W	01121	CB47G5
A24A1R862	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A24A1R864	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
A24A1R870	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A24A1R871	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A24A1R872	321-0199-00			RES.,FXD,FILM:1.15K OHM,1%,0.125W	91637	MFF1816G11500F
A24A1R873	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A24A1R874	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R875	315-0112-00			RES.,FXD,CMPSN:1.1K OHM,5%,0.25W	01121	CB1125
A24A1R876	315-0152-00			RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A24A1R877	321-0175-00			RES.,FXD,FILM:649 OHM,1%,0.125W	91637	MFF1816G649R0F
A24A1R878	321-0175-00			RES.,FXD,FILM:649 OHM,1%,0.125W	91637	MFF1816G649R0F
A24A1R879	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
A24A1R880	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R881	315-0271-00			RES.,FXD,CMPSN:270 OHM,5%,0.25W	01121	CB2715
A24A1R882	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A24A1R883	315-0431-00			RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
A24A1R884	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R885	315-0302-00			RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A24A1R886	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
A24A1R887	315-0112-00			RES.,FXD,CMPSN:1.1K OHM,5%,0.25W	01121	CB1125
A24A1R888	315-0622-00			RES.,FXD,CMPSN:6.2K OHM,5%,0.25W	01121	CB6225

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A24A1R889	315-0431-00			RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
A24A1R890	315-0302-00			RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A24A1R891	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A24A1R901	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R902	315-0153-00			RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
A24A1R903	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
A24A1R904	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R905	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R906	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R930	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A24A1R931	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R932	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R933	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R934	315-0270-00			RES.,FXD,CMPSN:27 OHM,5%,0.25W	01121	CB2705
A24A1R940	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R941	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A24A1R942	315-0270-00			RES.,FXD,CMPSN:27 OHM,5%,0.25W	01121	CB2705
A24A1R950	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R951	315-0182-00			RES.,FXD,CMPSN:1.8K OHM,5%,0.25W	01121	CB1825
A24A1R952	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R953	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R960	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A24A1R961	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A24A1R962	315-0821-00			RES.,FXD,CMPSN:820 OHM,5%,0.25W	01121	CB8215
A24A1R963	321-0172-00			RES.,FXD,FILM:604 OHM,1%,0.125W	91637	MFF1816G604R0F
A24A1R964	311-0622-00			RES.,VAR,NONWIR:100 OHM,10%,0.50W	32997	3329H-G48-101
A24A1R965	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
A24A1R970	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A24A1R971	322-0086-00			RES.,FXD,FILM:76.8 OHM,1%,0.25W		
A24A1R972	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A24A1R973	311-1261-00			RES.,VAR,NONWIR:500 OHM,10%,0.50W	32997	3329P-L58-501
A24A1R980	315-0271-00			RES.,FXD,CMPSN:270 OHM,5%,0.25W	01121	CB2715
A24A1R981	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A24A1R982	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A24A1R983	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
A24A1R984	311-1261-00			RES.,VAR,NONWIR:500 OHM,10%,0.50W	32997	3329P-L58-501
A24A1R987	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A24A1R988	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A24A1R989	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A24A1R990	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A24A1R991	322-0086-00			RES.,FXD,FILM:76.8 OHM,1%,0.25W		
A24A1R993	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A24A1R994	315-0153-00			RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
A24A1R995	315-0153-00			RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
A24A1R1000	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A24A1R1001	315-0912-00			RES.,FXD,CMPSN:9.1K OHM,5%,0.25W	01121	CB9125
A24A1R1002	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
A24A1R1003	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A24A1R1004	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A24A1R1050	308-0584-00			RES.,FXD,WW:20 OHM,0.5%,5W	91637	RS5-K20R00D
A24A1R1060	308-0240-00			RES.,FXD,WW:2 OHM,5%,3W	91637	RS2B-D2R000J
A24A1R1070	308-0240-00			RES.,FXD,WW:2 OHM,5%,3W	91637	RS2B-D2R000J
A24A1R5100	308-0584-00			RES.,FXD,WW:20 OHM,0.5%,5W	91637	RS5-K20R00D
A24A1R6100	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
A24A1R6101	315-0150-00			RES.,FXD,CMPSN:15 OHM,5%,0.25W	01121	CB1505
A24A1R6104	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
A24A1R7100	321-0232-00			RES.,FXD,FILM:2.55K OHM,1%,0.125W	91637	MFF1816G25500F

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A24A1R7101	321-0323-00			RES.,FXD,FILM:22.6K OHM,1%,0.125W	91637	MFF1816G22601F
A24A1R7102	321-0612-00			RES.,FXD,FILM:500 OHM,1%,0.125W	91637	MFF1816G500R0F
A24A1R7103	321-0193-00			RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A24A1R7104	321-0193-00			RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A24A1R7105	321-0256-00			RES.,FXD,FILM:4.53K OHM,1%,0.125W	91637	MFF1816G45300F
A24A1R8101	311-1269-00			RES.,VAR,NONWIR:20K OHM,10%,0.50W	32997	3329P-L58-203
A24A1TP015	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP105	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP120	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP279	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP280	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP301	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP302	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP320	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP350	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP355	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP360	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP365	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP368	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP420	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP450	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP460	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP570	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP571	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP590	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP595	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP775	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP801	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP861	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP875	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP880	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP960	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP961	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP971	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1TP5100	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A24A1U050	156-1309-00			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
A24A1U100	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
A24A1U101	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INPUT NAND GATE	01295	SN74LS10
A24A1U120	155-0144-00			MICROCIRCUIT,LI:DUAL IN-LINE,16 LEAD	80009	155-0144-00
A24A1U121	156-1172-01			MICROCIRCUIT,DI:DUAL 4 BIT CNTR,BURN-IN	01295	SN74LS393
A24A1U130	156-1059-01			MICROCIRCUIT,DI:DUAL J-K EDGE TRIGGERED	01295	SN74LS109A
A24A1U131	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
A24A1U140	156-1309-00			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
A24A1U141	156-0798-02			MICROCIRCUIT,DI:DUAL 14 TO 1 LINE SEL/MUX	01295	SN74LS153
A24A1U150	156-1309-00			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
A24A1U151	160-0357-00			MICROCIRCUIT,DI:256 BIT PROM W/3 STATE OUT	80009	160-0357-00
A24A1U160	156-0957-01			MICROCIRCUIT,DI:SYN 4 BIT UP/DOWN BINARY	27014	DM74LS169
A24A1U170	156-0633-01			MICROCIRCUIT,DI:HEX D MASTER SLAVE FF	04713	SC22689L176
A24A1U171	156-0368-03			MICROCIRCUIT,DI:TTL TO ECL QUAD TRANS	80009	156-0368-03
A24A1U200	156-0392-03			MICROCIRCUIT,DI:QUAD LATCH W/CLEAR	01295	SN74S175NP3
A24A1U220	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
A24A1U230	156-0957-01			MICROCIRCUIT,DI:SYN 4 BIT UP/DOWN BINARY	27014	DM74LS169
A24A1U240	156-0798-02			MICROCIRCUIT,DI:DUAL 14 TO 1 LINE SEL/MUX	01295	SN74LS153
A24A1U250	160-0364-00			MICROCIRCUIT,DI:256 BIT PROM W/3 STATE OUT	80009	160-0364-00
A24A1U260	160-0363-00			MICROCIRCUIT,DI:256 BIT PROM W/3 STATE OUT	80009	160-0363-00
A24A1U270	156-0957-01			MICROCIRCUIT,DI:SYN 4 BIT UP/DOWN BINARY	27014	DM74LS169
A24A1U300	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A

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A24A1U301	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INPUT NAND GATE	01295	SN74LS10
A24A1U360	156-1172-01			MICROCIRCUIT,DI:DUAL 4 BIT CNTR,BURN-IN	01295	SN74LS393
A24A1U361	156-0509-03			MICROCIRCUIT,DI:8-BIT BIN,MULT CUR,SCRN	04713	MC1408L8DS
A24A1U400	156-0957-01			MICROCIRCUIT,DI:SYN 4 BIT UP/DOWN BINARY	27014	DM74LS169
A24A1U401	156-0368-03			MICROCIRCUIT,DI:TTL TO ECL QUAD TRANS	80009	156-0368-03
A24A1U410	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
A24A1U411	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
A24A1U420	156-0957-01			MICROCIRCUIT,DI:SYN 4 BIT UP/DOWN BINARY	27014	DM74LS169
A24A1U421	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
A24A1U440	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
A24A1U450	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
A24A1U500	156-0230-02			MICROCIRCUIT,DI:DUAL D-TYPE M/S,FF,SCRN	80009	156-0230-02
A24A1U502	156-0205-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,SCRN	04713	SC22689L102
A24A1U560	155-0228-00			MICROCIRCUIT,DI:5 BIT A/D CONVERTER	80009	155-0228-00
A24A1U570	155-0228-00			MICROCIRCUIT,DI:5 BIT A/D CONVERTER	80009	155-0228-00
A24A1U600	156-0230-02			MICROCIRCUIT,DI:DUAL D-TYPE M/S,FF,SCRN	80009	156-0230-02
A24A1U610	156-0048-02			MICROCIRCUIT,LI:5 XSTR ARRAY	80009	156-0048-02
A24A1U620	156-0641-01			MICROCIRCUIT,DI:UNIV HEX CNTR,SCRN	80009	156-0641-01
A24A1U660	156-0936-00			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	80009	156-0936-00
A24A1U670	156-0700-01			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA741S
A24A1U680	155-0228-00			MICROCIRCUIT,DI:5 BIT A/D CONVERTER	80009	155-0228-00
A24A1U690	156-0700-01			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA741S
A24A1U720	156-0230-02			MICROCIRCUIT,DI:DUAL D-TYPE M/S,FF,SCRN	80009	156-0230-02
A24A1U730	156-0534-01			MICROCIRCUIT,LI:DUAL DIFF AMPL,BURN-IN	02735	CA3102EX
A24A1U750	156-0534-01			MICROCIRCUIT,LI:DUAL DIFF AMPL,BURN-IN	02735	CA3102EX
A24A1U780	156-0770-02			MICROCIRCUIT,LI:OPERATIONAL AMPL,CHK	80009	156-0770-02
A24A1U810	156-0369-02			MICROCIRCUIT,DI:TRIPLE DIFF LINE RECEIVER	04713	SC22689P216
A24A1U811	156-0770-02			MICROCIRCUIT,LI:OPERATIONAL AMPL,CHK	80009	156-0770-02
A24A1U850	156-0534-01			MICROCIRCUIT,LI:DUAL DIFF AMPL,BURN-IN	02735	CA3102EX
A24A1U880	156-0534-01			MICROCIRCUIT,LI:DUAL DIFF AMPL,BURN-IN	02735	CA3102EX
A24A1U890	156-0541-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR	01295	SN74LS139NP3
A24A1U920	156-0858-00			MICROCIRCUIT,DI:QUAD SPST ANALOG XMSN GATE	17856	DG201ACJ
A24A1U930	156-0534-01			MICROCIRCUIT,LI:DUAL DIFF AMPL,BURN-IN	02735	CA3102EX
A24A1U980	156-0534-01			MICROCIRCUIT,LI:DUAL DIFF AMPL,BURN-IN	02735	CA3102EX
A24A1U990	156-0858-00			MICROCIRCUIT,DI:QUAD SPST ANALOG XMSN GATE	17856	DG201ACJ
A24A1U1010	156-1309-00			MICROCIRCUIT,DI:QUAD 2-1NP NAND GATE	01295	SN74LS00
A24A1U1020	156-0541-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR	01295	SN74LS139NP3
A24A1U1060	156-0655-01			MICROCIRCUIT,LI:VOLTAGE RGLTR,BURN-IN	04713	MC7905.2CTD
A24A1U1061	156-0872-01			MICROCIRCUIT,LI:VOLTAGE REGULATOR	04713	MC7912CTD
A24A1U1070	156-0285-01			MICROCIRCUIT,LI:VOLTAGE REGULATOR,CHK	04713	MC7812CTD
A24A1U5110	156-0277-01			MICROCIRCUIT,LI:POSITIVE VOLTAGE REG	04713	MC7805CTD
A24A1U6110	156-0700-01			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA741S
A24A1U6111	156-0700-01			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA741S
A24A1U8101	156-0783-01			MICROCIRCUIT,LI:VOLTAGE REFERENCE,SELECTED	0001F	156-0783-01

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A28	672-0778-00	B010100	B010192	CKT BOARD ASSY:ROM/PROM OPERATING SYSTEM	80009	672-0778-00
A28	672-0778-01	B010193	B019999	CKT BOARD ASSY:ROM/PROM OPERATING SYSTEM	80009	672-0778-01
A28	672-0778-02	B020000		CKT BOARD ASSY:ROM/PROM OPERATING SYSTEM	80009	672-0778-02
A28	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A28C001	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C011	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C021	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C031	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C041	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C051	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C061	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C071	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C081	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C151	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C171	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C181	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C221	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C251	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C261	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C271	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C281	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C321	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C361	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C371	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C381	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C391	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C411	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C441	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C442	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C451	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C461	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C471	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C481	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C501	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C511	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C532	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C552	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C561	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A28C571	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28C581	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A28P011	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P021	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P031	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P041	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P051	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P061	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P071	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P081	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P111	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P121	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P131	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P141	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P151	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P161	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P171	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P181	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P211	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P221	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P231	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P241	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P251	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P261	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P271	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P281	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P311	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P321	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P331	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P341	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P351	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P361	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P371	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P381	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P391	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P412	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P541	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P542	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28P562	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28R001	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R002	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A28R003	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R091	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R101	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R191	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R201	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R202	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A28R203	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R301	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R401	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A28R421	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A28R431	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R432	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R461	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A28R471	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A28R481	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A28R501	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A28R502	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A28R503	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A28R504	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A28R505	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A28R511	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A28R541	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A28R542	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A28R543	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A28R551	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A28R561	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A28R571	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A28R581	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A28TP411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28TP481	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28TP561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A28U001	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A28U011	160-0545-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0545-00
	----- -----			(672-0778-00,672-0778-01 ONLY)		
A28U021	160-0914-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0914-00
	----- -----			(2716, 672-0778-00,672-0778-01 ONLY)		
A28U021	160-0914-02			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0914-02
	----- -----			(2732, 672-0778-02 ONLY)		
A28U031	160-0427-00			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT,SCRN	80009	160-0427-00
	----- -----			(670-0778-00 ONLY)		
A28U031	160-0427-01			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0427-01
	----- -----			(2732, 672-0778-01 ONLY)		
A28U031	160-0427-02			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0427-02
	----- -----			(2732, 672-0778-02 ONLY)		
A28U041	160-0419-00			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT	80009	160-0419-00
	----- -----			(SCREENED, 672-0778-00 ONLY)		
A28U041	160-0419-01			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0419-01
	----- -----			(2732, 672-0778-01 ONLY)		
A28U041	160-0419-02			MICROCIRCUIT,DI:4096 X 8 EPROM PROGRAMMED	80009	160-0419-02
	----- -----			(2732, 672-0778-02 ONLY)		
A28U051	160-0546-00			MICROCIRCUIT,DI:2084 X 8 EPROM,PROGRAMMED	80009	160-0546-00
	----- -----			(672-0778-00,672-0778-01 ONLY)		
A28U061	160-0915-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0915-00
	----- -----			(2716, 672-0778-00,672-0778-01 ONLY)		
A28U061	160-0915-02			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0915-02
	----- -----			(2632, 672-0778-02 ONLY)		
A28U070	160-0428-00			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT	80009	160-0428-00
	----- -----			(672-0778-00 ONLY)		
A28U070	160-0428-01			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0428-01
	----- -----			(2632, 672-0778-01 ONLY)		
A28U070	160-0428-02			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0428-02
	----- -----			(2732, 672-0778-02 ONLY)		
A28U081	160-0420-00			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT	80009	160-0420-00
	----- -----			(SCREENED, 672-0778-00 ONLY)		
A28U081	160-0420-01			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT	80009	160-0420-01
	----- -----			(SCREENED, 672-0778-01 ONLY)		
A28U081	160-0420-02			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0420-02
	----- -----			(2732, 672-0778-02 ONLY)		
A28U121	160-0433-00			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT	80009	160-0433-00
	----- -----			(SCREENED,672-0778-00,672-0778-01 ONLY)		
A28U121	160-0433-02			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0433-02
	----- -----			(2732, 672-0778-02 ONLY)		

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A28U131	160-0425-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED, 672-0778-00 ONLY)	80009	160-0425-00
A28U131	160-0425-01 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-01 ONLY)	80009	160-0425-01
A28U131	160-0425-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0425-02
A28U141	160-0417-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED,672-0778-00,672-0778-01 ONLY)	80009	160-0417-00
A28U141	160-0417-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0417-02
A28U161	160-0434-00 ----- -----			MICROCIRCUIT,DI:4096 X W/3 STATE OUT (SCREENED,672-0778-00,672-0778-01 ONLY)	80009	160-0434-00
A28U161	160-0434-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0434-02
A28U171	160-0426-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED, 672-0778-00 ONLY)	80009	160-0426-00
A28U171	160-0426-01 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-01 ONLY)	80009	160-0426-01
A28U171	160-0426-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0426-02
A28U181	160-0418-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED,672-0778-00,672-0778-01 ONLY)	80009	160-0418-00
A28U181	160-0418-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0418-02
A28U201	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A28U221	160-0431-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED,672-0778-00,672-0778-01 ONLY)	80009	160-0431-00
A28U221	160-0431-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0431-02
A28U231	160-0423-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED,672-0778-00,672-0778-01 ONLY)	80009	160-0423-00
A28U231	160-0423-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0423-02
A28U241	160-0415-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED, 672-0778-00 ONLY)	80009	160-0415-00
A28U241	160-0415-01 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-01 ONLY)	80009	160-0415-01
A28U241	160-0415-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0415-02
A28U261	160-0432-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED,672-0778-00,672-0778-01 ONLY)	80009	160-0432-00
A28U261	160-0432-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0432-02
A28U271	160-0424-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED,672-0778-00,672-0778-01 ONLY)	80009	160-0424-00
A28U271	160-0424-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0424-02
A28U281	160-0416-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED, 672-0778-00 ONLY)	80009	160-0416-00
A28U281	160-0416-01 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-01 ONLY)	80009	160-0416-01
A28U281	160-0416-02 ----- -----			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0416-02
A28U321	160-0429-00 ----- -----			MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED, 672-0778-00 ONLY)	80009	160-0429-00

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A28U321	160-0429-01	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-01 ONLY)	80009	160-0429-01
A28U321	160-0429-02	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0429-02
A28U331	160-0421-00	-----	-----	MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED,672-0778-00,672-0778-01 ONLY)	80009	160-0421-00
A28U331	160-0421-02	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0421-02
A28U341	160-0413-00	-----	-----	MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (672-0778-00, 672-0778-01 ONLY)	80009	160-0413-00
A28U341	160-0413-02	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0413-02
A28U361	160-0430-00	-----	-----	MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (SCREENED, 672-0778-00 ONLY)	80009	160-0430-00
A28U361	160-0430-01	-----	-----	MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (2732, 672-0778-01 ONLY)	80009	160-0430-01
A28U361	160-0430-02	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0430-02
A28U371	160-0422-00	-----	-----	MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (672-0778-00, 672-0778-01 ONLY)	80009	160-0422-00
A28U371	160-0422-02	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0422-02
A28U381	160-0414-00	-----	-----	MICROCIRCUIT,DI:4096 X 8 W/3 STATE OUT (672-0778-00, 672-0778-01 ONLY)	80009	160-0414-00
A28U381	160-0414-02	-----	-----	MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED (2732, 672-0778-02 ONLY)	80009	160-0414-02
A28U391	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A28U401	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A28U411	156-0469-02	-----	-----	MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A28U421	156-0469-02	-----	-----	MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A28U461	160-0580-00	-----	-----	MICROCIRCUIT,DI:2048 X 8 FPLA,PROGRAMMED (672-0778-00, 672-0778-01 ONLY)	80009	160-0580-00
A28U471	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A28U481	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A28U501	156-1179-01	-----	-----	MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4
A28U511	156-0539-01	-----	-----	MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A28U521	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A28U531	156-0539-01	-----	-----	MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A28U532	156-0323-02			MICROCIRCUIT,DI:HEX INVERTER,BURN-IN	01295	SN74S04
A28U541	156-0404-01	-----	-----	MICROCIRCUIT,DI:DUAL 4-INP NAND GATE (BURN-IN)	80009	156-0404-01
A28U551	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A28U552	156-0180-04			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE	01295	SN74S00NP3
A28U561	156-0321-02	-----	-----	MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S10
A28U571	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A28U581	156-0956-02	-----	-----	MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A30	672-0826-00			CKT BOARD ASSY:I/O(RS232)W/CONN & BRACKETS	80009	672-0826-00
A30	672-0826-01			CKT BOARD ASSY:I/O(RS232)W/CONN & BRACKETS	80009	672-0826-01
	----- -----			(OPTION 12 ONLY)		
A30	670-5698-00			CKT BOARD ASSY:I/O INTERFACE	80009	670-5698-00
A30C011	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C012	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C013	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C014	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C021	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C022	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C023	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C024	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C031	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C032	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C033	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C034	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C051	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C052	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C053	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C054	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C111	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C112	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C113	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C114	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C132	283-0067-00			CAP.,FXD,CER DI:0.001UF,10%,200V	59660	835-515-Z5D0102K
A30C142	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C151	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C152	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C153	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C154	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C232	283-0067-00			CAP.,FXD,CER DI:0.001UF,10%,200V	59660	835-515-Z5D0102K
A30C251	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C252	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C253	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C254	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
A30C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C321	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C361	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A30C402	290-0215-00			CAP.,FXD,ELCTLT:100UF,+75-10%,25V	56289	30D107G025DD9
A30CR001	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR002	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR003	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR004	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR021	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR022	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR031	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR032	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR051	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR052	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A30CR161	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR162	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR261	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30CR262	152-0242-00			SEMICOND DEVICE:SILICON,225V,200MA	07263	FDH5004
A30J0	131-0812-00			CONN,RCPT,ELEC:CKT BD MT,25 CONT, FEMALE	00779	205858-1
A30J1	131-2199-00			CONN,RCPT,ELEC:CKT CARD,25 CONT,MALE,RIGHT	00779	205857-1
A30J2	131-0812-00			CONN,RCPT,ELEC:CKT BD MT,25 CONT, FEMALE	00779	205858-1
A30J3	131-2199-00			CONN,RCPT,ELEC:CKT CARD,25 CONT,MALE,RIGHT	00779	205857-1
A30J4	131-0812-00			CONN,RCPT,ELEC:CKT BD MT,25 CONT, FEMALE	00779	205858-1
A30J151	175-3097-00			CA ASSY,SP,ELEC:13,26 AWG 4.5 L	80009	175-3097-00
	----- -----			(OPTION 12 ONLY)		
A30J152	131-0570-00			CONNECTOR,RCPT,:25 PIN,MALE	71468	DB25P
	----- -----			(OPTION 12 ONLY)		
A30P001	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P011	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P15EN	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
	----- -----			(BOUND RATE,MASTER PORT ABCDEFG)		
A30P032	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P041	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P042	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P061	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P131	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P151	131-1426-00			CONTACT SET,ELE:R ANGLE,0.250L,STRIP OF 36	22526	65524-136
A30P151	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
A30P211	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P212	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P213	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P214	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P215	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P216	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P221	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P232	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P311	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P312	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P313	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P314	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P315	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30P316	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A30R001	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
A30R002	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A30R011	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A30R021	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
A30R032	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A30R042	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A30R051	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
A30R061	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A30R101	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A30R131	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R201	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A30R211	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A30R212	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A30R221	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R232	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R301	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A30R311	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R312	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R313	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A30R314	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A30R331	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R341	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R342	315-0621-00			RES.,FXD,CMPSN:620 OHM,5%,0.25W	01121	CB6215
A30R343	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A30R345	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R351	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A30R401	308-0240-00			RES.,FXD,WW:2 OHM,5%,3W	91637	RS2B-D2R000J
A30U001	156-0878-01			MICROCIRCUIT,DI:QUAD LINE RCVR,SCRN	80009	156-0878-01
A30U002	156-0879-01			MICROCIRCUIT,DI:QUAD LINE DRIVER,SCRN	80009	156-0879-01
A30U011	156-0878-01			MICROCIRCUIT,DI:QUAD LINE RCVR,SCRN	80009	156-0878-01
A30U021	156-0879-01			MICROCIRCUIT,DI:QUAD LINE DRIVER,SCRN	80009	156-0879-01
A30U022	156-0878-01			MICROCIRCUIT,DI:QUAD LINE RCVR,SCRN	80009	156-0878-01
A30U031	156-0879-01			MICROCIRCUIT,DI:QUAD LINE DRIVER,SCRN	80009	156-0879-01
A30U041	156-0878-01			MICROCIRCUIT,DI:QUAD LINE RCVR,SCRN	80009	156-0878-01
A30U042	156-0878-01			MICROCIRCUIT,DI:QUAD LINE RCVR,SCRN	80009	156-0878-01
A30U051	156-0879-01			MICROCIRCUIT,DI:QUAD LINE DRIVER,SCRN	80009	156-0879-01
A30U061	156-0878-01			MICROCIRCUIT,DI:QUAD LINE RCVR,SCRN	80009	156-0878-01
A30U101	156-0470-02			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE	01295	SN74LS251
A30U110	156-0879-01			MICROCIRCUIT,DI:QUAD LINE DRIVER,SCRN	80009	156-0879-01
A30U111	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
	----- -----			(SCREENED)		
A30U121	156-0874-02			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH	80009	156-0874-02
	----- -----			(SCREENED)		
A30U122	156-0735-02			MICROCIRCUIT,DI:4 BIT BISTABLE LCH,BURN-IN	01295	SN74LS75
	----- -----			(SCREENED)		
A30U131	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INPUT NAND GATE	01295	SN74LS10
	----- -----			(SCREENED)		
A30U132	156-0404-01			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE	80009	156-0404-01
	----- -----			(BURN-IN)		
A30U141	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INPUT NAND GATE	01295	SN74LS10
	----- -----			(SCREENED)		
A30U142	156-0735-02			MICROCIRCUIT,DI:4 BIT BISTABLE LCH,BURN-IN	01295	SN74LS75
	----- -----			(SCREENED)		
A30U151	156-0878-01			MICROCIRCUIT,DI:QUAD LINE RCVR,SCRN	80009	156-0878-01
	----- -----			(OPTION 12 ONLY)		
A30U161	156-0879-01			MICROCIRCUIT,DI:QUAD LINE DRIVER,SCRN	80009	156-0879-01
	----- -----			(OPTION 12 ONLY)		
A30U201	156-0470-02			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE	01295	SN74LS251
	----- -----			(SCREENED)		
A30U211	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
	----- -----			(SCREENED)		
A30U212	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
	----- -----			(SCREENED)		
A30U221	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
	----- -----			(SCREENED)		
A30U222	156-0303-01			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74S03
	----- -----			(BURN-IN)		
A30U223	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INPUT NAND GATE	01295	SN74LS10
	----- -----			(SCREENED)		
A30U231	156-0470-02			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE	01295	SN74LS251
	----- -----			(SCREENED)		
A30U232	156-0874-02			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH	80009	156-0874-02
	----- -----			(SCREENED)		
A30U241	156-1295-00			MICROCIRCUIT,DI:ASYNCHRONOUS COMMUNICATION	80009	156-1295-00
A30U242	156-1295-00			MICROCIRCUIT,DI:ASYNCHRONOUS COMMUNICATION	80009	156-1295-00
A30U251	156-0878-01			MICROCIRCUIT,DI:QUAD LINE RCVR,SCRN	80009	156-0878-01
	----- -----			(OPTION 12 ONLY)		

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A30U261	156-0879-01 ----- -----			MICROCIRCUIT,DI:QUAD LINE DRIVER,SCRN (OPTION 12 ONLY)	80009	156-0879-01
A30U301	156-0470-02 ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED)	01295	SN74LS251
A30U311	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A30U312	156-0539-01 ----- -----			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A30U321	156-0914-02 ----- -----			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT (SCREENED)	01295	SN74LS240
A30U331	156-0479-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP ORGATE (SCREENED)	01295	SN74LS32NP3
A30U341	156-1267-00 ----- -----			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER (SCREENED)	04713	SN74LS15
A30U342	156-0382-02 ----- -----			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE (BURN-IN & RELIABILITY)	01295	SN74LS00
A30U351	156-0470-02 ----- ----- ----- -----			MICROCIRCUIT,DI:8-INP DATA SEL W/3 STATE (SCREENED) (OPTITON 12 ONLY)	01295	SN74LS251
A30U352	156-0874-02 ----- -----			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH (SCREENED, OPTION 12 ONLY)	80009	156-0874-02
A30U361	156-0385-02 ----- -----			MICROCIRCUIT,DI:HEX INVERTER (SCREENED, OPTION 12 ONLY)	01295	SN74LS04
A30U401	156-0872-01 ----- -----			MICROCIRCUIT,LI:VOLTAGE REGULATOR (BURN-IN & RELIABILITY, MC7912C)	04713	MC7912CTD

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A34	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A34	672-0891-00			CKT BOARD ASSY:ROM/PROM APPLICATIONS NTSC	80009	672-0891-00
A34	----- -----			V.1 ASSEMBLY A (OPTION 1 ONLY)		
A34C001	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C011	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C021	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C031	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C041	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C051	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C061	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C071	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C081	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C151	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C171	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C181	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C221	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C251	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C261	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C271	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C281	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C321	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C361	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C371	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C381	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C391	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C411	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C441	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C442	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C451	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C461	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C471	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C481	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C501	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C511	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C532	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C552	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C561	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34C571	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

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A34C581	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A34P011	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P021	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P031	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P041	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P051	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P061	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P071	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P081	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P111	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P121	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P131	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P141	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P151	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P161	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P171	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P181	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P211	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P221	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P231	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P241	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P251	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P261	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P271	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P281	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P311	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P321	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P331	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P341	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P351	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P361	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P371	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P381	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P391	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P412	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P541	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P542	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34P562	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34R001	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R002	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A34R003	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R091	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R101	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R191	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R201	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R202	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A34R203	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R301	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R401	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A34R421	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A34R431	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R432	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R461	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A34R471	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A34R481	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01

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A34R501	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A34R502	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A34R503	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A34R504	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A34R505	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A34R511	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A34R541	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A34R542	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A34R543	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A34R551	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A34R561	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A34R571	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A34R581	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A34TP411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34TP481	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34TP561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A34U001	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A34U021	160-0569-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0569-00
A34U031	160-0561-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0561-00
A34U041	160-0553-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0553-00
A34U061	160-0570-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0570-00
A34U071	160-0562-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0562-00
A34U081	160-0554-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0554-00
A34U111	160-0575-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0575-00
A34U121	160-0567-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0567-00
A34U131	160-0559-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0559-00
A34U141	160-0551-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0551-00
A34U151	160-0576-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0576-00
A34U161	160-0568-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0568-00
A34U171	160-0560-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0560-00
A34U181	160-0552-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0552-00
A34U201	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A34U211	160-0573-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0573-00
A34U221	160-0565-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0565-00
A34U231	160-0557-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0557-00
A34U241	160-0549-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0549-00
A34U251	160-0574-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0574-00

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A34U261	160-0566-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0566-00
A34U271	160-0558-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0558-00
A34U281	160-0550-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0550-00
A34U311	160-0571-00 ----- ----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0571-00
A34U321	160-0563-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0563-00
A34U331	160-0555-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0555-00
A34U341	160-0547-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0547-00
A34U351	160-0572-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0572-00
A34U361	160-0564-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0564-00
A34U371	160-0556-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0556-00
A34U381	160-0548-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (2716)	80009	160-0548-00
A34U391	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A34U401	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A34U411	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A34U421	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A34U471	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A34U481	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A34U501	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4
A34U511	156-0539-01 ----- -----			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A34U521	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A34U531	156-0539-01 ----- -----			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A34U532	156-0323-02			MICROCIRCUIT,DI:HEX INVERTER,BURN-IN	01295	SN74S04
A34U541	156-0404-01 ----- -----			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE (BURN-IN)	80009	156-0404-01
A34U551	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A34U552	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN)	01295	SN74S00NP3
A34U561	156-0321-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S10
A34U571	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A34U581	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A36	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A36	672-0939-00			CKT BOARD ASSY:ROM/PROM APPLICATIONS NTSC	80009	672-0939-00
	----- -----			(V.1 ASSY. B, OPTION 1 ONLY)		
A36C001	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C011	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C021	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C031	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C041	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C051	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C061	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C071	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C081	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C151	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C171	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C181	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C221	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C251	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C261	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C271	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C281	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C321	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C361	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C371	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C381	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C391	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C411	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C441	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C442	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C451	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C461	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C471	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C481	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C501	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C511	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C532	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C552	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C561	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36C571	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A36C581	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A36P011	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P021	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P031	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P041	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P051	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P061	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P071	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P081	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P111	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P121	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P131	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P141	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P151	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P161	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P171	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P181	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P211	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P221	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P231	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P241	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P251	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P261	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P271	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P281	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P311	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P321	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P331	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P341	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P351	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P361	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P371	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P381	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P391	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P412	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P541	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P542	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36P562	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36R001	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R002	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A36R003	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R091	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R101	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R191	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R201	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R202	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A36R203	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R301	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R401	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A36R421	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A36R431	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R432	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R461	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A36R471	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A36R481	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A36R501	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A36R502	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A36R503	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A36R504	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A36R505	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A36R511	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A36R541	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A36R542	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A36R543	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A36R551	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A36R561	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A36R571	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A36R581	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A36TP411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36TP481	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36TP561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A36U001	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (BURN-IN,74LS244)	01295	SN74LS244NP3
A36U041	160-0882-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0882-00
A36U081	160-0883-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0883-00
A36U141	160-0880-00 ----- -----			MICROCIRCUIT,DI:2048 X E EPROM,PROGRAMMED (INT2716)	80009	160-0880-00
A36U181	160-0881-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0881-00
A36U201	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (BURN-IN,74LS244)	01295	SN74LS244NP3
A36U231	160-0937-00			MICROCIRCUIT,DI:2048 X 8 EPROM PRGM	80009	160-0937-00
A36U241	160-0878-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0878-00
A36U271	160-0938-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0938-00
A36U281	160-0879-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0878-00
A36U331	160-0916-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0916-00
A36U341	160-0876-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0876-00
A36U371	160-0917-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0917-00
A36U381	160-0877-00 ----- -----			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED (INT2716)	80009	160-0877-00
A36U391	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A36U401	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A36U411	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A36U421	156-0469-02 ----- -----			MICROCIRCUIT,DI:3/8 LINE DCDR (SCREENED)	01295	SN74LS138NP3
A36U471	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A36U481	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A36U501	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A36U511	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
	----- -----			(SCREENED, 8136)		
A36U521	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A36U531	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
	----- -----			(SCREENED, 8136)		
A36U532	156-0323-02			MICROCIRCUIT,DI:HEX INVERTER,BURN-IN	01295	SN74S04
A36U541	156-0404-01			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE	80009	156-0404-01
	----- -----			(BURN-IN,74S22)		
A36U551	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A36U552	156-0180-04			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE	01295	SN74S00NP3
	----- -----			(BURN-IN)		
A36U561	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	01295	SN74S10
	----- -----			(BURN-IN)		
A36U571	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		
A36U581	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A38	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A38	672-1050-00			CKT BOARD ASSY:PAL APPLICATIONS	80009	672-1050-00
	----- -----			(OPTION 02 ONLY)		
A38C001	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C011	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C021	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C031	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C041	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C051	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C061	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C071	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C081	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C151	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C171	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C181	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C221	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C251	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C261	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C271	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C281	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C321	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C361	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C371	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C381	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C391	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C411	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C441	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C442	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C451	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C461	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C471	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C481	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C501	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C511	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C532	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C552	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C561	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38C571	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A38C581	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A38P011	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P021	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P031	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P041	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P051	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P061	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P071	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P081	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P111	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P121	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P131	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P141	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P151	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P161	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P171	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P181	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P211	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P221	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P231	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P241	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P251	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P261	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P271	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P281	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P311	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P321	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P331	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P341	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P351	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P361	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P371	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P381	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P391	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P412	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P541	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P542	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38P562	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38R001	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R002	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A38R003	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R091	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R101	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R191	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R201	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R202	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A38R203	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R301	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R401	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A38R421	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A38R431	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R432	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R461	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A38R471	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A38R481	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A38R501	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A38R502	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A38R503	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A38R504	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A38R505	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A38R511	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A38R541	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A38R543	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A38R551	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A38R561	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A38R571	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A38R581	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A38R542	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A38TP411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38TP481	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38TP561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A38U001	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A38U021	160-0603-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0603-00
A38U031	160-0595-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0595-00
A38U041	160-0587-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0587-00
A38U061	160-0604-00			MICROCIRCUIT,DI-4096 X 8 EPROM,PROGRAMMED	80009	160-0604-00
A38U071	160-0596-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0596-00
A38U081	160-0588-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0588-00
A38U121	160-0601-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0601-00
A38U131	160-0593-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0593-00
A38U141	160-0585-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0585-00
A38U161	160-0602-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0602-00
A38U171	160-0594-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0594-00
A38U181	160-0586-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0568-00
A38U201	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A38U221	160-0599-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0599-00
A38U231	160-0591-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0591-00
A38U241	160-0583-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0583-00
A38U261	160-0600-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0600-00
A38U271	160-0592-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0592-00
A38U281	160-0584-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0584-00
A38U321	160-0597-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0597-00
A38U331	160-0589-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0589-00
A38U341	160-0581-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0581-00
A38U361	160-0598-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0598-00
A38U371	160-0590-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0590-00
A38U381	160-0582-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0582-00
A38U391	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A38U401	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A38U411	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
A38U421	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
A38U471	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A38U481	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A38U501	156-1179-01			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT	01295	SN74S241 JP4
A38U511	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
A38U521	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A38U531	156-0539-01			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR	80009	156-0539-01
A38U532	156-0323-02			MICROCIRCUIT,DI:HEX INVERTER,BURN-IN	01295	SN74S04
A38U541	156-0404-01			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE	80009	156-0404-01
A38U551	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A38U552	156-0180-04			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE	01295	SN74S00NP3
A38U561	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	01295	SN74S10
A38U571	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A38U581	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A40	670-5701-00			CKT BOARD ASSY:FRONT PANEL	80009	670-5701-00
A40DS01	150-1059-00			LT EMITTING DIO:RED	50434	5082-4658
A40DS05	150-1059-00			LT EMITTING DIO:RED	50434	5082-4658
A40DS07	150-1059-00			LT EMITTING DIO:RED	50434	5082-4658
A40DS09	150-1059-00			LT EMITTING DIO:RED	50434	5082-4658
A40DS11	150-1059-00			LT EMITTING DIO:RED	50434	5082-4658
A40DS13	150-1059-00			LT EMITTING DIO:RED	50434	5082-4658
A40DS15	150-1059-00			LT EMITTING DIO:RED	50434	5082-4658
A40P01	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
A40P02	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
A40P03	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
A40P04	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
A40R01	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A40R03	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
A40R05	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A40R07	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A40R09	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A40R11	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A40R13	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A40R15	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A42	670-6316-00			CKT BOARD ASSY:60K WORD ROM/PROM	80009	670-6316-00
A42	672-1069-00 ----- -----			CKT BOARD ASSY:60K WORD ROM/PROM (OPTION 03 ONLY)	80009	672-1069-00
A42C001	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C011	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C021	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C031	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C041	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C051	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C061	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C071	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C081	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C151	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C171	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C181	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C201	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C221	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C251	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C261	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C271	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C281	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C321	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C361	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C371	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C381	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C391	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C401	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C411	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C441	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C442	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C451	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C461	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C471	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C481	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C501	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C511	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C532	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C552	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C561	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42C571	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A42C581	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
A42P011	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P021	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P031	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P041	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P051	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P061	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P071	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P081	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P111	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P121	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P131	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P141	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P151	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P161	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P171	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P181	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P211	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P221	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P231	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P241	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P251	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P261	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P271	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P281	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P311	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P321	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P331	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P341	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P351	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P361	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P371	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P381	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P391	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P412	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P541	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P542	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42P562	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42R001	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R002	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A42R003	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R091	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R101	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R191	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R201	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R202	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A42R203	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R301	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R401	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A42R421	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A42R431	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R432	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R461	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A42R471	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A42R481	307-0650-00			RES NTWK,FXD,FI:9,2.7K OHM,5%,0.150W	32997	4310R-101-272

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A42R501	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A42R502	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A42R503	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A42R504	307-0649-00			RES NTWK,FXD FI:8,33 OHM,2%,0.125W	01121	316B330
A42R505	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A42R511	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A42R541	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A42R542	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A42R543	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A42R551	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A42R561	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A42R571	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A42R581	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A42TP411	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42TP481	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42TP561	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A42U001	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
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A42U021	160-0601-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0601-00
A42U031	160-1654-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1654-00
A42U041	160-1646-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1646-00
A42U061	160-0602-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0602-00
A42U071	160-1655-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1655-00
A42U081	160-1647-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1647-00
A42U121	160-0599-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0599-00
A42U131	160-1652-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1652-00
A42U141	160-1644-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1644-00
A42U161	160-0600-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0600-00
A42U171	160-1653-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1653-00
A42U181	160-1645-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1645-00
A42U201	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
A42U221	160-1658-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1658-00
A42U231	160-1650-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1650-00
A42U241	160-1642-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1642-00
A42U261	160-1659-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1659-00
A42U271	160-1651-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1651-00
A42U281	160-1643-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1643-00
A42U311	160-0603-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0603-00
A42U321	160-1656-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1656-00
A42U331	160-1648-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1648-00
A42U341	160-1640-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1640-00
A42U351	160-0604-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-0604-00
A42U361	160-1657-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1657-00
A42U371	160-1649-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1649-00
A42U381	160-1641-00			MICROCIRCUIT,DI:4096 X 8 EPROM,PROGRAMMED	80009	160-1641-00
A42U391	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		
A42U401	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		
A42U411	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
	----- -----			(SCREENED)		
A42U421	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
	----- -----			(SCREENED)		
A42U471	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		
A42U481	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
	----- -----			(SCREENED)		

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A42U501	156-1179-01 ----- -----			MICROCIRCUIT,DI:OCTAL BFR,W/3 STATE OUT (SCREENED)	01295	SN74S241 JP4
A42U511	156-0539-01 ----- -----			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A42U521	156-0738-04			MICROCIRCUIT,DI:HEX D FF W/CLEAR,BURN-IN	01295	SN74S174(JP4)
A42U531	156-0539-01 ----- -----			MICROCIRCUIT,DI:6 BIT UNIFIED BUS COMPTR (SCREENED)	80009	156-0539-01
A42U532	156-0323-02			MICROCIRCUIT,DI:HEX INVERTER,BURN-IN	01295	SN74S04
A42U541	156-0690-03			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE,BURN-IN	01295	SN74S02
A42U551	156-0404-01			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE	80009	156-0404-01
A42U552	156-0180-04 ----- -----			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE (BURN-IN)	01295	SN74S00NP3
A42U561	156-0321-02 ----- -----			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE (BURN-IN)	01295	SN74S10
A42U571	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3
A42U581	156-0956-02 ----- -----			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT (SCREENED)	01295	SN74LS244NP3

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A50	672-0877-00			CKT BOARD ASSY:MAIN INTERFACE W/HARDWARE	80009	672-0877-00
A50	670-6412-00			CKT BOARD ASSY:MAIN INTERFACE	80009	670-6412-00
A50C011	290-0117-00			CAP.,FXD,ELCTLT:50UF,+75-10%,50V	56289	30D506G050DD9
A50C247	290-0772-00			CAP.,FXD,ELCTLT:330UF,+50-10%,25V	0000L	ECE-B25Z330
A50C267	290-0772-00			CAP.,FXD,ELCTLT:330UF,+50-10%,25V	0000L	ECE-B25Z330
A50C367	290-0772-00			CAP.,FXD,ELCTLT:330UF,+50-10%,25V	0000L	ECE-B25Z330
A50C557	290-0117-00			CAP.,FXD,ELCTLT:50UF,+75-10%,50V	56289	30D506G050DD9
A50C567	290-0772-00			CAP.,FXD,ELCTLT:330UF,+50-10%,25V	0000L	ECE-B25Z330
A50C657	290-0117-00			CAP.,FXD,ELCTLT:50UF,+75-10%,50V	56289	30D506G050DD9
A50C747	290-0772-00			CAP.,FXD,ELCTLT:330UF,+50-10%,25V	0000L	ECE-B25Z330
A50C767	290-0772-00			CAP.,FXD,ELCTLT:330UF,+50-10%,25V	0000L	ECE-B25Z330
A50C868	281-0604-00			CAP.,FXD,CER DI:2.2PF,+/-0.25PF,500V	04222	7001-1336
A50C917	290-0117-00			CAP.,FXD,ELCTLT:50UF,+75-10%,50V	56289	30D506G050DD9
A50C927	290-0772-00			CAP.,FXD,ELCTLT:330UF,+50-10%,25V	0000L	ECE-B25Z330
A50C978	281-0659-00			CAP.,FXD,CER DI:4.3PF,+/-0.25PF,500V	59660	301-000C0H0439C
A50CR555	152-0075-00			SEMICOND DEVICE:GE,25V,40MA	14433	G866
A50DS812	150-1014-00			LAMP,LED:RED,50MA	58361	Q6444/MV5054-1
A50DS822	150-1014-00			LAMP,LED:RED,50MA	58361	Q6444/MV5054-1
A50DS842	150-1014-00			LAMP,LED:RED,50MA	58361	Q6444/MV5054-1
A50DS862	150-1014-00			LAMP,LED:RED,50MA	58361	Q6444/MV5054-1
A50DS872	150-1014-00			LAMP,LED:RED,50MA	58361	Q6444/MV5054-1
A50L978	108-0260-00			COIL,RF:98NH	80009	108-0260-00
A50L988	108-0260-00			COIL,RF:98NH	80009	108-0260-00
A50P011	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P012	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P021	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P022	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P031	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P032	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P041	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P042	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P051	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P052	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P061	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P062	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P071	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P072	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P081	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P082	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P083	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
A50P091	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P092	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P101	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P102	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P111	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P112	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P121	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P122	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P131	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P132	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P141	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P142	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P171	131-2351-00			CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
A50P172	131-2352-00			CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
A50P560	175-2428-00			CA ASSY,SP,ELEC:24,18 AWG,24.0 L	80009	175-2428-00
A50P848	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
A50P868	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A50P878	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
A50P888	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
A50P928	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
A50P948	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
A50P968	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
A50P978	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
A50P988	131-1097-00			CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
A50R035	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A50R077	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A50R083	305-0240-00			RES.,FXD,CMPSN:24 OHM,5%,2W	01121	HB2405
A50R085	307-0650-01			RES NTWK,FXD FI:9,2.7K OHM,5%,0.15W,CHK	80009	307-0650-01
A50R550	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A50R552	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A50R812	315-0911-00			RES.,FXD,CMPSN:910 OHM,5%,0.25W	01121	CB9115
A50R822	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A50R842	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
A50R862	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
A50R872	315-0911-00			RES.,FXD,CMPSN:910 OHM,5%,0.25W	01121	CB9115
A50R942	321-0085-00			RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
A50TP055	131-1688-00			TERM,QIK DISC:MALE,0.032 X 0.25 BL,45 DEG	00779	42577-4
A50TP056	131-1688-00			TERM,QIK DISC:MALE,0.032 X 0.25 BL,45 DEG	00779	42577-4

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60	620-0286-00			POWER SUPPLY:	80009	620-0286-00
	----- -----			(OPTION 1, OPTION 3 ONLY)		
A60	620-0286-01			POWER SUPPLY:	80009	620-0286-01
A60A1	670-6046-00			CKT BOARD ASSY:INVERTER	80009	670-6046-00
A60A1	670-6046-01			CKT BOARD ASSY:INVERTER	80009	670-6046-01
	----- -----			(USED WITH 620-0286-01 ONLY)		
A60A1C021	290-0779-00			CAP.,FXD,ELCTLT:10UF,+50-10%,50VDC	56289	502D237
A60A1C051	290-0798-00			CAP.,FXD,ELCTLT:180UF,+100-10%,40V	56289	672D187H040DM5C
A60A1C052	290-0798-00			CAP.,FXD,ELCTLT:180UF,+100-10%,40V	56289	672D187H040DM5C
A60A1C101	285-1192-00			CAP.,FXD,PPR DI:0.0022UF,20%,250VAC	000FG	PME271Y422
A60A1C111	285-1192-00			CAP.,FXD,PPR DI:0.0022UF,20%,250VAC	000FG	PME271Y422
	----- -----			(670-6046-00 ONLY)		
A60A1C111	283-0659-00			CAP.,FXD,MICA D:1160PF,2%,500V	00853	D195F1161G0
	----- -----			(670-6046-01 ONLY)		
A60A1C112	285-1171-00			CAP.,FXD,MTLZD:2 UF,10%,200 V	84411	X363UW(ADVISE)
A60A1C121	290-0779-00			CAP.,FXD,ELCTLT:10UF,+50-10%,50VDC	56289	502D237
A60A1C141	283-0198-00			CAP.,FXD,CER DI:0.22UF,20%,50V	56289	1C10Z5U223M050B
	----- -----			(670-6046-00 ONLY)		
A60A1C141	283-0659-00			CAP.,FXD,MICA D:1160PF,2%,500V	00853	D195F1161G0
	----- -----			(670-6046-01 ONLY)		
A60A1C151	290-0798-00			CAP.,FXD,ELCTLT:180UF,+100-10%,40V	56289	672D187H040DM5C
A60A1C152	290-0798-00			CAP.,FXD,ELCTLT:180UF,+100-10%,40V	56289	672D187H040DM5C
A60A1C211	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
A60A1C212	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
A60A1C213	285-1171-00			CAP.,FXD,MTLZD:2 UF,10%,200 V	84411	X363UW(ADVISE)
A60A1C221	283-0198-00			CAP.,FXD,CER DI:0.22UF,20%,50V	56289	1C10Z5U223M050B
	----- -----			(670-6046-00 ONLY)		
A60A1C221	283-0659-00			CAP.,FXD,MICA D:1160PF,2%,500V	00853	D195F1161G0
	----- -----			(670-6046-01 ONLY)		
A60A1C241	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A60A1C301	283-0008-00			CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
A60A1C303	283-0008-00			CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
	----- -----			(670-6046-01 ONLY)		
A60A1C311	283-0208-00			CAP.,FXD,CER DI:0.22UF,10%,200V	72982	8151N230 C 224K
A60A1C312	283-0008-00			CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
	----- -----			(670-6046-01 ONLY)		
A60A1C351	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A60A1C352	283-0594-00			CAP.,FXD,MICA D:0.001UF,1%,100V	00853	D151F102F0
A60A1C361	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
A60A1C401	285-1192-00			CAP.,FXD,PPR DI:0.0022UF,20%,250VAC	000FG	PME271Y422
A60A1C411	283-0008-00			CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
	----- -----			(670-6046-01 ONLY)		
A60A1C412	283-0008-00			CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
	----- -----			(670-6046-01 ONLY)		
A60A1C421	290-0878-00			CAP.,FXD,ELCTLT:1100UF,-10+75%,200V	90201	PFP112 5 R4A 3P1
A60A1C422	285-1192-00			CAP.,FXD,PPR DI:0.0022UF,20%,250VAC	000FG	PME271Y422
	----- -----			(670-6046-00 ONLY)		
A60A1C442	285-0598-00			CAP.,FXD,PLSTC:0.01UF,5%,100V	19396	DU490B103J
A60A1C443	281-0812-00			CAP.,FXD,CER DI:1000PF,10%,100V	72982	8035D9AADX7R102K
	----- -----			(670-6046-01 ONLY)		
A60A1C444	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
	----- -----			(670-6046-01 ONLY)		
A60A1C451	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A1C452	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A1C453	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
A60A1C454	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
A60A1C455	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A1C456	283-0094-00			CAP.,FXD,CER DI:27PF,10%,200V	59660	835-583-C0G0270K
A60A1C501	283-0008-00			CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
	----- -----			(670-6046-01 ONLY)		
A60A1C502	283-0008-00			CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
	----- -----			(670-6046-01 ONLY)		
A60A1C503	283-0008-00			CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
	----- -----			(670-6046-01 ONLY)		
A60A1C521	290-0878-00			CAP.,FXD,ELCTLT:1100UF,-10+75%,200V	90201	PFP112 5 R4A 3P1
A60A1C522	290-0831-00			CAP.,FXD,ELCTLT:470UF,+50-10%,50V	55680	ULB1H471TKAANA
A60A1C531	290-0853-00			CAP.,FXD,ELCTLT:5600UF,+50-10%,6.3V	90201	VPR562T6R3N1L6B
A60A1C532	283-0204-00			CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A60A1C541	290-0800-00			CAP.,FXD,ELCTLT:250UF,+100-10%,20V	56289	672D257H0200M5C
A60A1C551	283-0060-00			CAP.,FXD,CER DI:100PF,5%,200V	72982	855-535U2J101J
A60A1C552	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
A60A1C553	283-0094-00			CAP.,FXD,CER DI:27PF,10%,200V	59660	835-583-C0G0270K
A60A1C554	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
A60A1C621	283-0204-00			CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A60A1C622	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
A60A1C631	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A1CR001	152-0398-00			SEMICOND DEVICE:SILICON,200V,1A	04713	SR3609RL
A60A1CR021	152-0720-00			SEMICOND DEVICE:SILICON,100V,7A	80009	152-0720-00
A60A1CR022	152-0720-00			SEMICOND DEVICE:SILICON,100V,7A	80009	152-0720-00
A60A1CR031	152-0720-00			SEMICOND DEVICE:SILICON,100V,7A	80009	152-0720-00
A60A1CR032	152-0720-00			SEMICOND DEVICE:SILICON,100V,7A	80009	152-0720-00
A60A1CR033	152-0720-00			SEMICOND DEVICE:SILICON,100V,7A	80009	152-0720-00
A60A1CR041	152-0720-00			SEMICOND DEVICE:SILICON,100V,7A	80009	152-0720-00
A60A1CR042	152-0720-00			SEMICOND DEVICE:SILICON,100V,7A	80009	152-0720-00
A60A1CR043	152-0720-00			SEMICOND DEVICE:SILICON,100V,7A	80009	152-0720-00
A60A1CR101	152-0398-00			SEMICOND DEVICE:SILICON,200V,1A	04713	SR3609RL
A60A1CR102	152-0398-00			SEMICOND DEVICE:SILICON,200V,1A	04713	SR3609RL
A60A1CR103	152-0398-00			SEMICOND DEVICE:SILICON,200V,1A	04713	SR3609RL
A60A1CR131	152-0642-00			SEMICOND DEVICE:RECT,SI,35V,40A,	01281	SD5218
A60A1CR211	152-0400-00			SEMICOND DEVICE:SILICON,400V,1A	80009	152-0400-00
A60A1CR212	152-0400-00			SEMICOND DEVICE:SILICON,400V,1A	80009	152-0400-00
A60A1CR213	152-0400-00			SEMICOND DEVICE:SILICON,400V,1A	80009	152-0400-00
A60A1CR214	152-0400-00			SEMICOND DEVICE:SILICON,400V,1A	80009	152-0400-00
A60A1CR221	152-0398-00			SEMICOND DEVICE:SILICON,200V,1A	04713	SR3609RL
	----- -----			(670-6046-01 ONLY)		
A60A1CR222	152-0398-00			SEMICOND DEVICE:SILICON,200V,1A	04713	SR3609RL
	----- -----			(670-6046-01 ONLY)		
A60A1CR231	152-0642-00			SEMICOND DEVICE:RECT,SI,35V,40A,DO-5	01281	SD5218
A60A1CR241	152-0066-00			SEMICOND DEVICE:SILICON,400V,1A	14433	LG4016
A60A1CR301	152-0400-00			SEMICOND DEVICE:SILICON,400V,1A	80009	152-0400-00
A60A1CR311	152-0676-00			SEMICOND DEVICE:RECT,SI,400V,3A	03508	A115DX112
	----- -----			(670-6046-00 ONLY)		
A60A1CR311	152-0750-00			SEMICOND DEVICE:RECT BRIDGE,600V,3A	80009	152-0750-00
	----- -----			(670-6046-01 ONLY)		
A60A1CR312	152-0676-00			SEMICOND DEVICE:RECT,SI,400V,3A	03508	A115DX112
	----- -----			(670-6046-00 ONLY)		
A60A1CR313	152-0676-00			SEMICOND DEVICE:RECT,SI,400V,3A	03508	A115DX112
	----- -----			(670-6046-00 ONLY)		
A60A1CR314	152-0676-00			SEMICOND DEVICE:RECT,SI,400V,3A	03508	A115DX112
	----- -----			(670-6046-00 ONLY)		
A60A1CR321	152-0398-00			SEMICOND DEVICE:SILICON,200V,1A	04713	SR3609RL
	----- -----			(670-6046-00 ONLY)		
A60A1CR322	152-0398-00			SEMICOND DEVICE:SILICON,200V,1A	04713	SR3609RL
	----- -----			(670-6046-00 ONLY)		

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A1CR341	152-0066-00			SEMICOND DEVICE:SILICON,400V,1A	14433	LG4016
A60A1CR351	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A1CR451	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A1CR452	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A1CR453	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A1CR521	152-0066-00			SEMICOND DEVICE:SILICON,400V,1A	14433	LG4016
A60A1CR522	152-0066-00			SEMICOND DEVICE:SILICON,400V,1A	14433	LG4016
A60A1CR531	152-0585-00			SEMICOND DEVICE:SILICON,BRIDGE,200V,1A	80009	152-0585-00
A60A1CR641	152-0066-00			SEMICOND DEVICE:SILICON,400V,1A	14433	LG4016
A60A1CR651	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A1DS311	150-0035-00			LAMP,GLOW:90V,0.3MA	53944	A1B-3
A60A1DS641	150-1032-00			LT EMITTING DIO:YELLOW,580NM,40MA,MAX	53184	XC-5569-Y2
A60A1DS642	150-1001-02			LT EMITTING DIO:RED,660NM,50MA MAX	07263	FLV160/CLIP
A60A1E401	119-0181-00			ARSR,ELEC SURGE:230V,GAS FILLED	74276	CG230L
A60A1E411	119-0181-00			ARSR,ELEC SURGE:230V,GAS FILLED	74276	CG230L
A60A1J001	131-2264-00			CONN,RCPT,ELEC:CKT BD,10 CONTACT,R ANGLE	27264	09-62-3101
		-----	-----	(670-6046-00 ONLY)		
A60A1J001	131-2403-00			TERM SET,PIN:12 CONT,MALE	80009	131-2403-00
		-----	-----	(670-6046-01 ONLY)		
A60A1J021	131-2205-00			TERM,FEEDTHRU:4 PIN INSULATED	27264	H-2402-12KG
A60A1J031	131-2205-00			TERM,FEEDTHRU:4 PIN INSULATED	27264	H-2402-12KG
A60A1L051	108-0909-00			COIL,RF:FIXED,1.6MH	80009	108-0909-00
A60A1L151	108-0909-00			COIL,RF:FIXED,1.6MH	80009	108-0909-00
A60A1L241	108-0972-00			COIL,RF:FIXED,500UH	80009	108-0972-00
A60A1L251	108-0910-00			COIL,RF:560UH	80009	108-0910-00
A60A1L252	108-0910-00			COIL,RF:560UH	80009	108-0910-00
A60A1L301	108-0973-00			COIL,RF:FXD,140UH	80009	108-0973-00
		-----	-----	(670-6046-00 ONLY)		
A60A1L301	108-1105-00			COIL,RF:FIXED,TOROID,136MH	80009	108-1105-00
		-----	-----	(670-6046-01 ONLY)		
A60A1L331	108-0951-00			COIL,RF:FIXED,41UH,TOROIDAL	32159	SRR30.30
A60A1L501	108-0972-00			COIL,RF:FIXED,500UH	80009	108-0972-00
		-----	-----	(670-6046-00 ONLY)		
A60A1L531	108-0974-00			COIL,RF:FIXED,4UH	80009	108-0974-00
A60A1P002	131-2403-00			TERM SET,PIN:12 CONT,MALE	80009	131-2403-00
		-----	-----	(670-6046-00 ONLY)		
A60A1P002	131-2264-00			CONN,RCPT,ELEC:CKT BD,10 CONTACT,R ANGLE	27264	09-62-3101
		-----	-----	(670-6046-01 ONLY)		
A60A1P003	131-2403-00			TERM SET,PIN:12 CONT,MALE	80009	131-2403-00
		-----	-----	(670-6046-00 ONLY)		
A60A1P003	131-2264-00			CONN,RCPT,ELEC:CKT BD,10 CONTACT,R ANGLE	27264	09-62-3101
		-----	-----	(670-6046-01 ONLY)		
A60A1Q201	151-0679-00			TRANSISTOR:SILICON,NPN	04713	SJE362
A60A1Q202	151-0679-00			TRANSISTOR:SILICON,NPN	04713	SJE362
A60A1Q321	151-0390-00			TRANSISTOR:SILICON,NPN	04713	SPS3414
A60A1Q322	151-0391-00			TRANSISTOR:SILICON,PNP	80009	151-0391-00
A60A1Q331	151-0390-00			TRANSISTOR:SILICON,NPN	04713	SPS3414
A60A1Q351	151-0622-00			TRANSISTOR:SILICON,PNP	27014	92PU01AU51A
A60A1Q352	151-0224-00			TRANSISTOR:SILICON,NPN	07263	SA24850
A60A1Q441	151-0352-00			TRANSISTOR:SILICON,NPN	03508	X44C282
A60A1Q442	151-0622-00			TRANSISTOR:SILICON,PNP	27014	92PU01AU51A
A60A1Q443	151-0224-00			TRANSISTOR:SILICON,NPN	07263	SA24850
		-----	-----	(670-6046-01 ONLY)		
A60A1Q444	151-0224-00			TRANSISTOR:SILICON,NPN	07263	SA24850
		-----	-----	(670-6046-01 ONLY)		
A60A1Q451	151-0622-00			TRANSISTOR:SILICON,PNP	27014	92PU01AU51A
A60A1Q452	151-0224-00			TRANSISTOR:SILICON,NPN	07263	SA24850

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A60A1Q621	151-0224-00			TRANSISTOR:SILICON,NPN	07263	SA24850
A60A1R001	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A1R011	305-0271-00			RES.,FXD,CMPSN:270 OHM,5%,2W	01121	HB2715
	----- -----			(670-6046-00 ONLY)		
A60A1R011	305-0101-00			RES.,FXD,CMPSN:100 OHM,5%,2W	01121	HB1015
	----- -----			(670-6046-01 ONLY)		
A60A1R012	315-0271-00			RES.,FXD,CMPSN:270 OHM,5%,0.25W	01121	CB2715
	----- -----			(670-6046-00 ONLY)		
A60A1R012	305-0101-00			RES.,FXD,CMPSN:100 OHM,5%,2W	01121	HB1015
	----- -----			(670-6046-01 ONLY)		
A60A1R112	315-0514-00			RES.,FXD,CMPSN:510K OHM,5%,0.25W	01121	CB5145
A60A1R113	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
	----- -----			(670-6046-01 ONLY)		
A60A1R121	306-0150-00			RES.,FXD,CMPSN:15 OHM,10%,2W	01121	HB1501
	----- -----			(670-6046-00 ONLY)		
A60A1R121	306-0100-00			RES.,FXD,CMPSN:10 OHM,10%,2W	01121	HB1001
	----- -----			(670-6046-01 ONLY)		
A60A1R141	306-0150-00			RES.,FXD,CMPSN:15 OHM,10%,2W	01121	HB1501
	----- -----			(670-6046-00 ONLY)		
A60A1R141	306-0100-00			RES.,FXD,CMPSN:10 OHM,10%,2W	01121	HB1001
	----- -----			(670-6046-01 ONLY)		
A60A1R212	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
	----- -----			(670-6046-00 ONLY)		
A60A1R212	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
	----- -----			(670-6046-01 ONLY)		
A60A1R213	315-0514-00			RES.,FXD,CMPSN:510K OHM,5%,0.25W	01121	CB5145
A60A1R214	315-0201-00			RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
	----- -----			(670-6046-00 ONLY)		
A60A1R301	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
A60A1R302	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A60A1R311	316-0565-00			RES.,FXD,CMPSN:5.6M OHM,10%,0.25W	01121	CB5651
A60A1R321	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A60A1R322	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A60A1R323	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A60A1R324	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A60A1R325	308-0620-00			RES.,FXD,WW:27.0 OHM,1%,3W	80009	308-0620-00
A60A1R331	315-0272-00			RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
A60A1R332	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A60A1R342	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A1R343	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
	----- -----			(670-6046-01 ONLY)		
A60A1R344	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
	----- -----			(670-6046-01 ONLY)		
A60A1R351	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A60A1R352	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A60A1R354	315-0243-00			RES.,FXD,CMPSN:24K OHM,5%,0.25W	01121	CB2435
A60A1R355	315-0752-00			RES.,FXD,CMPSN:7.5K OHM,5%,0.25W	01121	CB7525
A60A1R356	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A1R357	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A1R358	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A1R359	321-0325-00			RES.,FXD,FILM:23.7K OHM,1%,0.125W	91637	MFF1816G23701F
A60A1R360	315-0563-00			RES.,FXD,CMPSN:56K OHM,5%,0.25W	01121	CB5635
A60A1R361	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
	----- -----			(670-6046-00 ONLY)		
A60A1R361	321-0289-03			RES.,FXD,FILM:10K OHM,0.25%,0.125W	91637	MFF1816D10001C
	----- -----			(670-6046-01 ONLY)		
A60A1R362	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A1R363	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A1R421	303-0104-00			RES.,FXD,CMPSN:100K OHM,5%,1W	01121	GB1045
A60A1R422	303-0104-00			RES.,FXD,CMPSN:100K OHM,5%,1W	01121	GB1045
A60A1R443	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A1R444	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A60A1R445	315-0123-00			RES.,FXD,CMPSN:12K OHM,5%,0.25W	01121	CB1235
A60A1R446	315-0124-00	-----	-----	RES.,FXD,CMPSN:120K OHM,5%,0.25W (670-6046-01 ONLY)	01121	CB1245
A60A1R447	315-0243-00	-----	-----	RES.,FXD,CMPSN:24K OHM,5%,0.25W (670-6046-01 ONLY)	01121	CB2435
A60A1R448	315-0472-00	-----	-----	RES.,FXD,CMPSN:4.7K OHM,5%,0.25W (670-6046-01 ONLY)	01121	CB4725
A60A1R451	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A60A1R452	315-0224-00			RES.,FXD,CMPSN:220K OHM,5%,0.25W	01121	CB2245
A60A1R453	315-0225-00			RES.,FXD,CMPSN:2.2M OHM,5%,0.25W	01121	CB2255
A60A1R454	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A1R455	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A1R456	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A60A1R457	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A1R458	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A1R459	321-0289-00	-----	-----	RES.,FXD,FILM:10K OHM,1%,0.125W (670-6046-00 ONLY)	91637	MFF1816G10001F
A60A1R459	321-0289-03	-----	-----	RES.,FXD,FILM:10K OHM,0.25%,0.125W (670-6046-01 ONLY)	91637	MFF1816D10001C
A60A1R460	321-0347-00			RES.,FXD,FILM:40.2K OHM,1%,0.125W	91637	MFF1816G40201F
A60A1R461	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A1R462	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A1R463	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A1R464	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A60A1R465	315-0561-00			RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
A60A1R466	315-0821-00			RES.,FXD,CMPSN:820 OHM,5%,0.25W	01121	CB8215
A60A1R467	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A1R521	321-0289-00	-----	-----	RES.,FXD,FILM:10K OHM,1%,0.125W (670-6046-00 ONLY)	91637	MFF1816G10001F
A60A1R521	321-0289-03	-----	-----	RES.,FXD,FILM:10K OHM,0.25%,0.125W (670-6046-01 ONLY)	91637	MFF1816D10001C
A60A1R522	321-0335-00			RES.,FXD,FILM:30.1K OHM,1%,0.125W	91637	MFF1816G30101F
A60A1R541	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A1R542	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A60A1R543	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A60A1R544	321-0276-00			RES.,FXD,FILM:7.32K OHM,1%,0.125W	91637	MFF1816G73200F
A60A1R545	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A1R551	315-0103-00	-----	-----	RES.,FXD,CMPSN:10K OHM,5%,0.25W (670-6046-00 ONLY)	01121	CB1035
A60A1R551	315-0682-00	-----	-----	RES.,FXD,CMPSN:6.8K OHM,5%,0.25W (670-6046-01 ONLY)	01121	CB6825
A60A1R552	321-0099-00			RES.,FXD,FILM:105 OHM,1%,0.125W	91637	MFF1816G105R0F
A60A1R553	315-0330-00			RES.,FXD,CMPSN:33 OHM,5%,0.25W	01121	CB3305
A60A1R554	321-0289-03			RES.,FXD,FILM:10K OHM,0.25%,0.125W	91637	MFF1816D10001C
A60A1R555	321-0289-03			RES.,FXD,FILM:10K OHM,0.25%,0.125W	91637	MFF1816D10001C
A60A1R556	321-0638-00			RES.,FXD,FILM:7.96K OHM,1%,0.125W	24546	NA55D7961F
A60A1R557	321-0289-00	-----	-----	RES.,FXD,FILM:10K OHM,1%,0.125W (670-6046-00 ONLY)	91637	MFF1816G10001F
A60A1R557	321-0289-03	-----	-----	RES.,FXD,FILM:10K OHM,0.25%,0.125W (670-6046-01 ONLY)	91637	MFF1816D10001C
A60A1R558	315-0225-00			RES.,FXD,CMPSN:2.2M OHM,5%,0.25W	01121	CB2255
A60A1R559	315-0240-00			RES.,FXD,CMPSN:24 OHM,5%,0.25W	01121	CB2405

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A1R560	315-0512-00			RES.,FXD,CMPSN:5.1K OHM,5%,0.25W	01121	CB5125
A60A1R561	321-0406-02			RES.,FXD,FILM:165K OHM,0.5%,0.125W	91637	MFF1816D16502D
A60A1R562	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A1R563	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A1R621	315-0155-00			RES.,FXD,CMPSN:1.5M OHM,5%,0.25W	01121	CB1555
A60A1R622	315-0155-00			RES.,FXD,CMPSN:1.5M OHM,5%,0.25W	01121	CB1555
A60A1R623	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A60A1R624	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A1R631	315-0152-00			RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A60A1R632	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
A60A1R633	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A60A1R634	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A60A1R642	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A60A1R651	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A1RT411	307-0353-00			RES.,FXD,FILM:5 OHM,10%,DISC	15454	5DA5RO-K-270SS
A60A1RT412	307-0353-00			RES.,FXD,FILM:5 OHM,10%,DISC	15454	5DA5RO-K-270SS
A60A1S501	260-1967-00			SWITCH,SLIDE:DPDT,5A/250V	000FJ	4021.0512
A60A1T001	108-0982-00			COIL,ASSY,RF:FIXED 2 INDUCTORS,9.5MM&10MH	80009	108-0982-00
A60A1T011	120-1258-00			XFMR,PWR,STPDN:HF	80009	120-1258-00
A60A1T211	120-1119-01			TRANSFORMER,RF:BASE DRIVE	80009	120-1119-01
A60A1T311	120-1458-00			XFMR,RF:TOROID	80009	120-1458-00
A60A1T511	120-1252-00			XFMR,PWR,STPDN:	80009	120-1252-00
A60A1TP051	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP052	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP053	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP151	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP152	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP221	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP251	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP321	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP322	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP323	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP341	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP342	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP343	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP351	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP352	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP441	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP442	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP443	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP451	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP452	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP531	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP551	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1TP552	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
A60A1U341	156-0575-00			MICROCIRCUIT,DI:3-INPUT NOR GATE	80009	156-0575-00
	----- -----			(670-6046-01 ONLY)		
A60A1U341	156-0575-03			MICROCIRCUIT,DI:3-INPUT NOR GATE,SELECTED	80009	156-0575-03
	----- -----			(670-6046-00 ONLY)		
A60A1U342	156-0366-02			MICROCIRCUIT,DI:DUAL D FLIP-FLOP,CHK	80009	156-0366-02
A60A1U343	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
	----- -----			(670-6046-01 ONLY)		
A60A1U344	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
	----- -----			(670-6046-01 ONLY)		
A60A1U351	156-0767-00			MICROCIRCUIT,DI:HEX GATE	04713	MC14572UBC
A60A1U352	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
A60A1U353	156-0853-02			MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
	----- -----			(670-6046-00 ONLY)		

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A60A1U353	156-0853-00			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER,DUAL	27014	LM358N
	----- -----			(USED WITH 620-0826-01 ONLY)		
A60A1U362	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
	----- -----			(USED WITH 620-0286-00 ONLY)		
A60A1U541	156-1266-00			MICROCIRCUIT,LI:OVER VOLTAGE SENSING CKT	04713	SC77113LH
A60A1U551	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
A60A1U552	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
A60A1U621	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
A60A1U622	156-0853-02			MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
	----- -----			(670-6046-00 ONLY)		
A60A1U622	156-0853-00			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER,DUAL	27014	LM358N
	----- -----			(670-6046-01 ONLY)		
A60A1U631	156-0285-00			MICROCIRCUIT,LI:VOLTAGE REGULATOR	27014	LM340T-12
A60A1VR451	152-0662-00			SEMICOND DEVICE:ZENER,0.4W,5V,1%	04713	SZG195
A60A1VR621	152-0195-00			SEMICOND DEVICE:ZENER,0.4W,5.1V,5%	04713	SZ11755

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A2	670-6045-00			CKT BOARD ASSY:REGULATOR	80009	670-6045-00
A60A2C011	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C021	283-0116-00			CAP.,FXD,CER DI:820PF,5%,500V	72982	801-547B821J
A60A2C031	283-0103-00			CAP.,FXD,CER DI:180PF,5%,500V	59660	831-518-Z5D0181J
A60A2C051	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C052	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C053	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C054	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C055	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C056	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C111	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C112	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C121	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C122	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C123	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C131	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C132	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C133	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C134	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
A60A2C141	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C142	290-0758-00			CAP.,FXD,ELCTLT:2.2UF,+50-10%,160V	56289	502D227
A60A2C143	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C144	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
A60A2C145	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C151	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C152	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C153	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C154	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C155	283-0203-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
A60A2C221	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A60A2C222	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A60A2C241	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A60A2C251	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A60A2CR021	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A2CR031	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A2CR041	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A2CR051	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A2CR221	152-0066-00			SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A60A2CR231	152-0633-00			SEMICOND DEVICE:RECT,SI,30V,3A	04713	1N5821
A60A2CR241	152-0066-00			SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A60A2CR251	152-0066-00			SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A60A2J002	131-2265-00			TERM,FEEDTHRU:10 PIN,INSULATED	27264	09-70-1101
A60A2J003	131-2265-00			TERM,FEEDTHRU:10 PIN,INSULATED	27264	09-70-1101
A60A2Q032	151-0622-00			TRANSISTOR:SILICON,PNP	27014	92PU01AU51A
A60A2Q043	151-0622-00			TRANSISTOR:SILICON,PNP	27014	92PU01AU51A
A60A2Q054	151-0302-00			TRANSISTOR:SILICON,NPN	07263	S038487
A60A2R011	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A60A2R012	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A60A2R013	301-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.50W	01121	EB3315
A60A2R014	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A60A2R015	301-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.50W	01121	EB3315
A60A2R022	303-0270-00			RES.,FXD,CMPSN:27 OHM,5%,1W	01121	GB2705
A60A2R023	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A60A2R024	321-0779-03			RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
A60A2R031	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A2R032	321-0629-00			RES.,FXD,FILM:5.11K OHM,0.5%,0.125W	91637	MFF1816G51100D
A60A2R041	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A2R042	321-0603-00			RES.,FXD,FILM:15K OHM,0.25%,0.125W	91637	MFF1816D15001C
A60A2R051	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A2R052	321-0289-03			RES.,FXD,FILM:10K OHM,0.25%,0.125W	91637	MFF1816D10001C
A60A2R053	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A60A2R101	321-0366-00			RES.,FXD,FILM:63.4K OHM,1%,0.125W	91637	MFF1816G63401F
A60A2R102	321-0373-00			RES.,FXD,FILM:75K OHM, 1%,0.125W	91637	MFF1816G75001F
A60A2R103	321-0332-00			RES.,FXD,FILM:28K OHM,1%,0.125W	91637	MFF1816G28001F
A60A2R104	321-0351-00			RES.,FXD,FILM:44.2K OHM,1%,0.125W	91637	MFF1816G44201F
A60A2R105	321-0361-00			RES.,FXD,FILM:56.2K OHM,1%,0.125W	91637	MFF1816G56201F
A60A2R111	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A2R112	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A60A2R113	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A60A2R114	321-0289-03			RES.,FXD,FILM:10K OHM,0.25%,0.125W	91637	MFF1816D10001C
A60A2R121	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A2R122	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
A60A2R124	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A60A2R125	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A2R126	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A2R127	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A2R131	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
A60A2R132	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A2R133	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A60A2R134	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A2R135	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A2R141	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
A60A2R142	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A2R143	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A2R144	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A2R145	321-0271-00			RES.,FXD,FILM:6.49K OHM,1%,0.125W	91637	MFF1816G64900F
A60A2R146	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A2R151	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A2R152	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
A60A2R153	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A2R154	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A2R155	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A2R158	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A60A2R201	321-0339-00			RES.,FXD,FILM:33.2K OHM,1%,0.125W	91637	MFF1816G33201F
A60A2R211	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A60A2R212	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A60A2R213	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A60A2R214	321-0289-03			RES.,FXD,FILM:10K OHM,0.25%,0.125W	91637	MFF1816D10001C
A60A2R215	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A60A2R221	315-0333-00			RES.,FXD,CMPSN:33K OHM,5%,0.25W	01121	CB3335
A60A2R222	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A60A2R223	308-0678-00			RES.,FXD,WW:0.1 OHM,5%,2W	75042	BWH-R1000J
A60A2R224	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A2R225	321-0321-00			RES.,FXD,FILM:21.5K OHM,1%,0.125W	91637	MFF1816G21501F
A60A2R231	315-0823-00			RES.,FXD,CMPSN:82K OHM,5%,0.25W	01121	CB8235
A60A2R232	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A60A2R233	308-0678-00			RES.,FXD,WW:0.1 OHM,5%,2W	75042	BWH-R1000J
A60A2R241	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
A60A2R242	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A2R243	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A60A2R244	308-0678-00			RES.,FXD,WW:0.1 OHM,5%,2W	75042	BWH-R1000J
A60A2R251	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A2R252	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A60A2R253	308-0678-00			RES.,FXD,WW:0.1 OHM,5%,2W	75042	BWH-R1000J

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A2U111	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
A60A2U112	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
A60A2U121	156-0853-02			MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
A60A2U122	156-1266-00			MICROCIRCUIT,LI:OVER VOLTAGE SENSING CKT	04713	SC77113LH
A60A2U131	156-0853-02			MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
A60A2U141	156-0853-02			MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
A60A2U142	156-1266-00			MICROCIRCUIT,LI:OVER VOLTAGE SENSING CKT	04713	SC77113LH
A60A2U151	156-0853-02			MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
A60A2U211	156-1225-00			MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
A60A2VR111	152-0175-00			SEMICOND DEVICE:ZENER,0.4W,5.6V,5%	04713	SZG35008
A60A2VR112	152-0175-00			SEMICOND DEVICE:ZENER,0.4W,5.6V,5%	04713	SZG35008
A60A2VR121	152-0662-00			SEMICOND DEVICE:ZENER,0.4W,5V,1%	04713	SZG195
A60A2VR151	152-0265-00			SEMICOND DEVICE:ZENER,0.4W,24V,5%	04713	SZG35009K8
A60A2VR153	152-0265-00			SEMICOND DEVICE:ZENER,0.4W,24V,5%	04713	SZG35009K8

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A3	670-5613-00			CKT BOARD ASSY:FAN REGULATOR	80009	670-5613-00
A60A3C001	283-0032-00			CAP.,FXD,CER DI:470PF,5%,500V	72982	0831085Z5E00471J
A60A3C011	290-0768-00			CAP.,FXD,ELCTLT:10UF,+50-10%,100V	54473	ECE-A100V10L
A60A3C211	285-1050-00			CAP.,FXD,PLSTC:0.1UF,1%,200V	14752	230B1C104F
A60A3C212	285-1050-00			CAP.,FXD,PLSTC:0.1UF,1%,200V	14752	230B1C104F
A60A3C321	290-0768-00			CAP.,FXD,ELCTLT:10UF,+50-10%,100V	54473	ECE-A100V10L
A60A3C421	290-0758-00			CAP.,FXD,ELCTLT:2.2UF,+50-10%,160V	56289	502D227
A60A3CR101	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A3CR102	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A3CR103	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A3CR111	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A3CR112	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A3CR211	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A3CR212	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
A60A3CR311	152-0400-00			SEMICOND DEVICE:SILICON,400V,1A	80009	152-0400-00
A60A3CR321	152-0066-00			SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A60A3CR411	152-0400-00			SEMICOND DEVICE:SILICON,400V,1A	80009	152-0400-00
A60A3P021	131-2206-00			CONN,RCPT,ELEC:CKT BD,4 CONT FEMALE	27264	09-62-3041
A60A3P031	131-2206-00			CONN,RCPT,ELEC:CKT BD,4 CONT FEMALE	27264	09-62-3041
A60A3Q311	151-0634-00			TRANSISTOR:SILICON,NPN	04713	SJE1937
A60A3Q411	151-0634-00			TRANSISTOR:SILICON,NPN	04713	SJE1937
A60A3R001	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A60A3R002	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A60A3R011	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A60A3R101	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A3R102	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A60A3R103	315-0474-00			RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745
A60A3R104	315-0914-00			RES.,FXD,CMPSN:910K OHM,5%,0.25W	01121	CB9145
A60A3R105	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A3R106	315-0474-00			RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745
A60A3R111	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A60A3R112	321-0340-00			RES.,FXD,FILM:34K OHM,1%,0.125W	91637	MFF1816G34001F
A60A3R113	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
A60A3R114	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A60A3R115	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A60A3R201	321-0441-00			RES.,FXD,FILM:383K OHM,1%,0.125W	91637	MFF1816G38302F
A60A3R202	321-0441-00			RES.,FXD,FILM:383K OHM,1%,0.125W	91637	MFF1816G38302F
A60A3R211	315-0364-00			RES.,FXD,CMPSN:360K OHM,5%,0.25W	01121	CB3645
A60A3R212	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A3R213	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A60A3R311	321-0441-00			RES.,FXD,FILM:383K OHM,1%,0.125W	91637	MFF1816G38302F
A60A3R411	308-0230-00			RES.,FXD,WW:2.7K OHM,5%,3W	91637	CW2B-D27000J
A60A3R421	308-0230-00			RES.,FXD,WW:2.7K OHM,5%,3W	91637	CW2B-D27000J
A60A3T221	120-1164-00			TRANSFORMER,RF:FAN BASE DRIVE	80009	120-1164-00
A60A3U211	156-0495-00			MICROCIRCUIT,LI:OPNL AMPL	27014	LM324N
A60A3VR011	152-0514-00			SEMICOND DEVICE:ZENER,0.4W,10V,1%	80009	152-0514-00
A60A3VR012	152-0590-00			SEMICOND DEVICE:ZENER,18V,5% AT 7MA	04713	SZG35014K2

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A60A4	670-7444-00			CKT BOARD ASSY:FILTER BOARD	80009	670-7444-00
	----- -----			(USED WITH 620-0286-01)		
A60A4C1	285-1196-00			CAP.,FXD,PAPER:0.01UF,20%,250V	84411	PME 271 Y 510
A60A4C2	285-1196-00			CAP.,FXD,PAPER:0.01UF,20%,250V	84411	PME 271 Y 510
A60A4F1	159-0014-00			FUSE,CARTRIDGE:3AG,5A,250V,FAST-BLOW	71400	MTH5
A60A4L1	108-1124-00			COIL,RF:FIXED,TOROID,150MH	80009	108-1124-00
A60A4L2	108-1124-00			COIL,RF:FIXED,TOROID,150MH	80009	108-1124-00
A60Q011	151-0462-00			TRANSISTOR:SILICON,PNP	04713	SJE491
A60Q012	151-0464-00			TRANSISTOR:SILICON,NPN	04713	SJE412
A60Q021	151-0352-00			TRANSISTOR:SILICON,NPN	03508	X44C282
A60Q022	151-0426-00			TRANSISTOR:SILICON,NPN	03508	X44H242
A60Q023	151-0521-00			SCR:SI,MU-27	03508	C122B
A60Q031	151-0426-00			TRANSISTOR:SILICON,NPN	03508	X44H242
A60Q041	151-0521-00			SCR:SI,MU-27	03508	C122B
A60Q042	151-0352-00			TRANSISTOR:SILICON,NPN	03508	X44C282
A60Q051	151-0352-00			TRANSISTOR:SILICON,NPN	03508	X44C282
A60Q052	151-0464-00			TRANSISTOR:SILICON,NPN	04713	SJE412
A60Q053	151-0462-00			TRANSISTOR:SILICON,PNP	04713	SJE491
A60A4R1	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A4R2	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
A60A4RC1	119-1168-00			CAPACITOR-RES:0.1UF,20% & 22 OHM,10%,250V	14752	RG1782-1
A60A4RC2	119-1168-00			CAPACITOR-RES:0.1UF,20% & 22 OHM,10%,250V	14752	RG1782-1
A60A4T1	108-0982-00			COIL,ASSY,RF:FIXED 2 INDUCTORS,9.5MM&10MH	80009	108-0982-00

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				CHASSIS PARTS		
DS100	150-1071-00			LT EMITTING DIO:GREEN,565NM,20MA MAX	50434	QLMP-3531
E200	012-0869-00			CABLE,INTCON:15.0 L	80009	012-0869-00
E201	012-0869-01			CABLE,INTCON:15.0 L	80009	012-0869-01
F1001	159-0014-00	620028600		FUSE,CARTRIDGE:3AG,5A,250V,FAST-BLOW	71400	MTH5
FL1001	119-0420-00	620028600		FILTER,RFI:6A,250VAC,400HZ	02777	F-11935-6
J201	012-0869-00			CABLE,INTCON:15.0 L	80009	012-0869-00
J201	012-0869-01			CABLE,INTCON:15.0 L	80009	012-0869-01
J202	012-0869-00			CABLE,INTCON:15.0 L	80009	012-0869-00
J203	012-0869-00			CABLE,INTCON:15.0 L	80009	012-0869-00
J204	012-0869-00			CABLE,INTCON:15.0 L	80009	012-0869-00
J205	012-0869-00			CABLE,INTCON:15.0 L	80009	012-0869-00
J207	012-0869-00			CABLE,INTCON:15.0 L	80009	012-0869-00
J208	012-0869-00			CABLE,INTCON:15.0 L	80009	012-0869-00
Q1001	151-0526-00			SCR:SILICON,100V,35A	02735	2N3896
R1001	308-0818-00			RES.,FXD,WW:0.005 OHM,3%,10W	91637	RH10-89/.005 3%
R1002	308-0598-00			RES.,FXD,WW:2.12 OHM,1%,20W		
S100	260-1979-00			SWITCH,ROCKER:SPST,0.4VA,20V		
S101	260-1970-00			SWITCH,PUSH:0.4VA,20V MAXIMUM	09353	8125J81E
S102	260-1963-00			SWITCH,LOCK:DBL POLE,TRPLTHROW,200MA	80009	260-1963-00
S1001	260-1961-00			SWITCH,ROCKER:DPST,6(4)A,250V	000FJ	1802.1121

DIAGRAMS AND CIRCUIT BOARD ILLUSTRATIONS

Symbols

Graphic symbols and class designation letters are based on ANSI Standard Y32.2-1975.

Logic symbology is based on ANSI Y32.14-1973 in terms of positive logic. Logic symbols depict the logic function performed and may differ from the manufacturer's data.

The overline on a signal name indicates that the signal performs its intended function when it is in the low state.

Abbreviations are based on ANSI Y1.1-1972.

Other ANSI standards that are used in the preparation of diagrams by Tektronix, Inc. are:

Y14.15, 1966	Drafting Practices.
Y14.2, 1973	Line Conventions and Lettering.
Y10.5, 1968	Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering.

American National Standard Institute
1430 Broadway
New York, New York 10018

Component Values

Electrical components shown on the diagrams are in the following units unless noted otherwise:

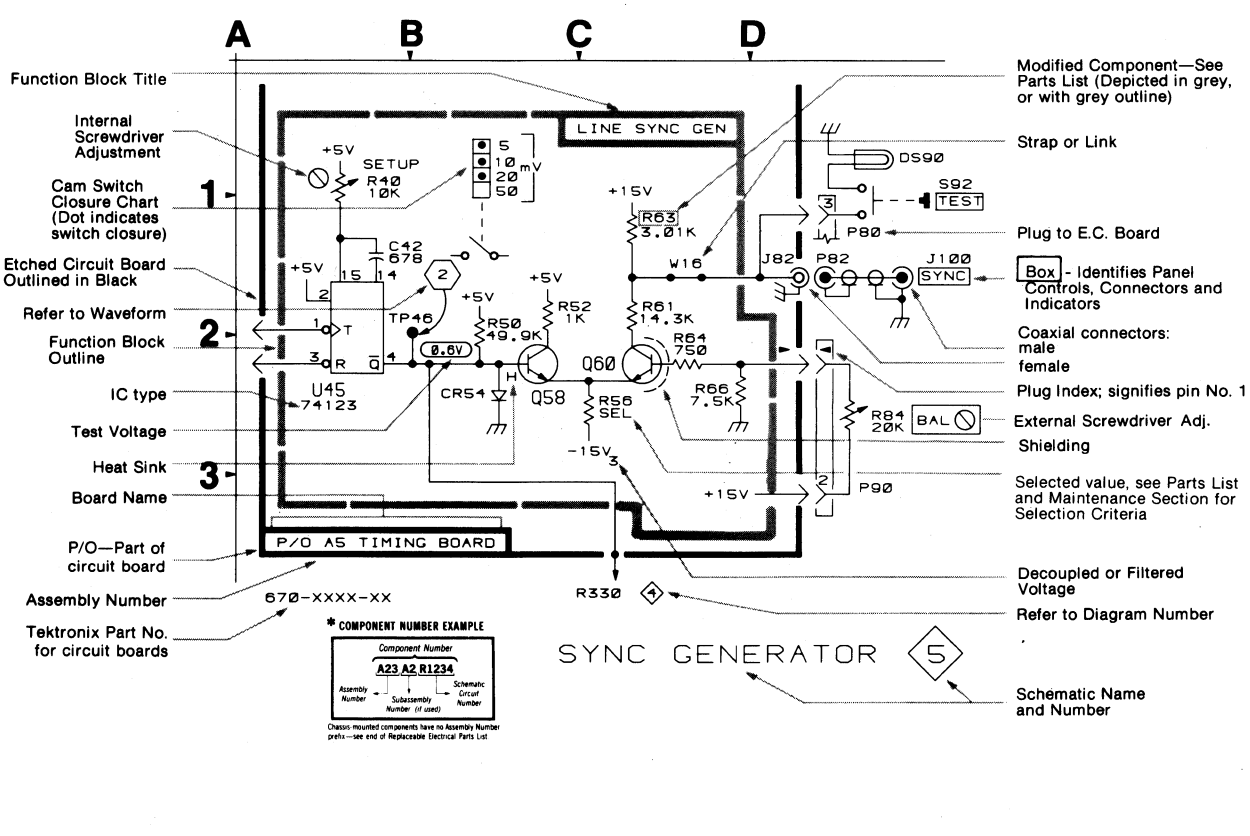
Capacitors = Values one or greater are in picofarads (pF).
Values less than one are in microfarads (μF).
Resistors = Ohms (Ω).

The information and special symbols below may appear in this manual.

Assembly Numbers and Grid Coordinates

Each assembly in the instrument is assigned an assembly number (e.g., A20). The assembly number appears on the circuit board outline on the diagram, in the title for the circuit board component location illustration, and in the lookup table for the schematic diagram and corresponding component locator illustration. The Replaceable Electrical Parts list is arranged by assemblies in numerical sequence; the components are listed by component number *(see following illustration for constructing a component number).

The schematic diagram and circuit board component location illustration have grids. A lookup table with the grid coordinates is provided for ease of locating the component. Only the components illustrated on the facing diagram are listed in the lookup table. When more than one schematic diagram is used to illustrate the circuitry on a circuit board, the circuit board illustration may only appear opposite the first diagram on which it was illustrated; the lookup table will list the diagram number of other diagrams that the circuitry of the circuit board appears on.



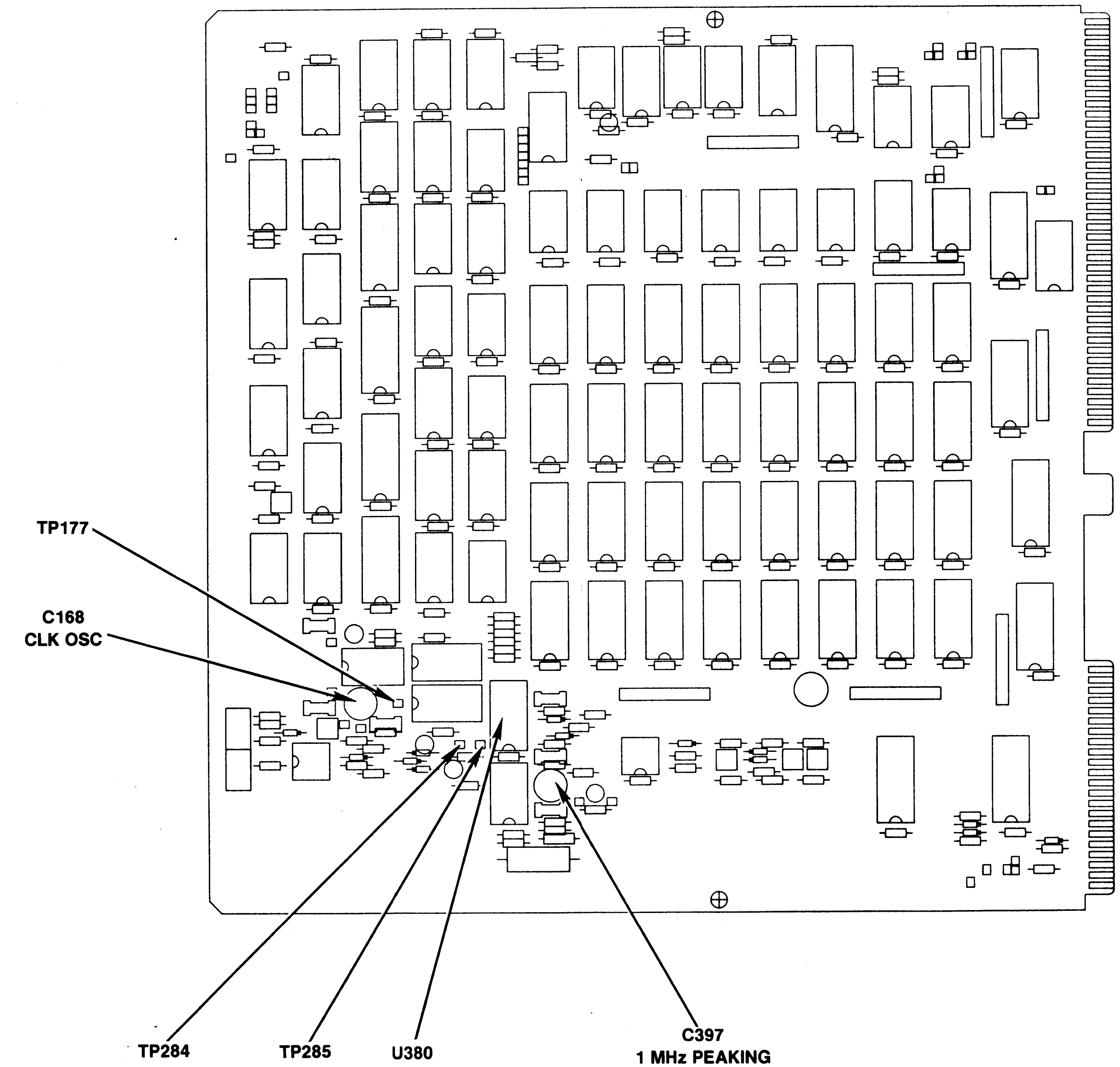
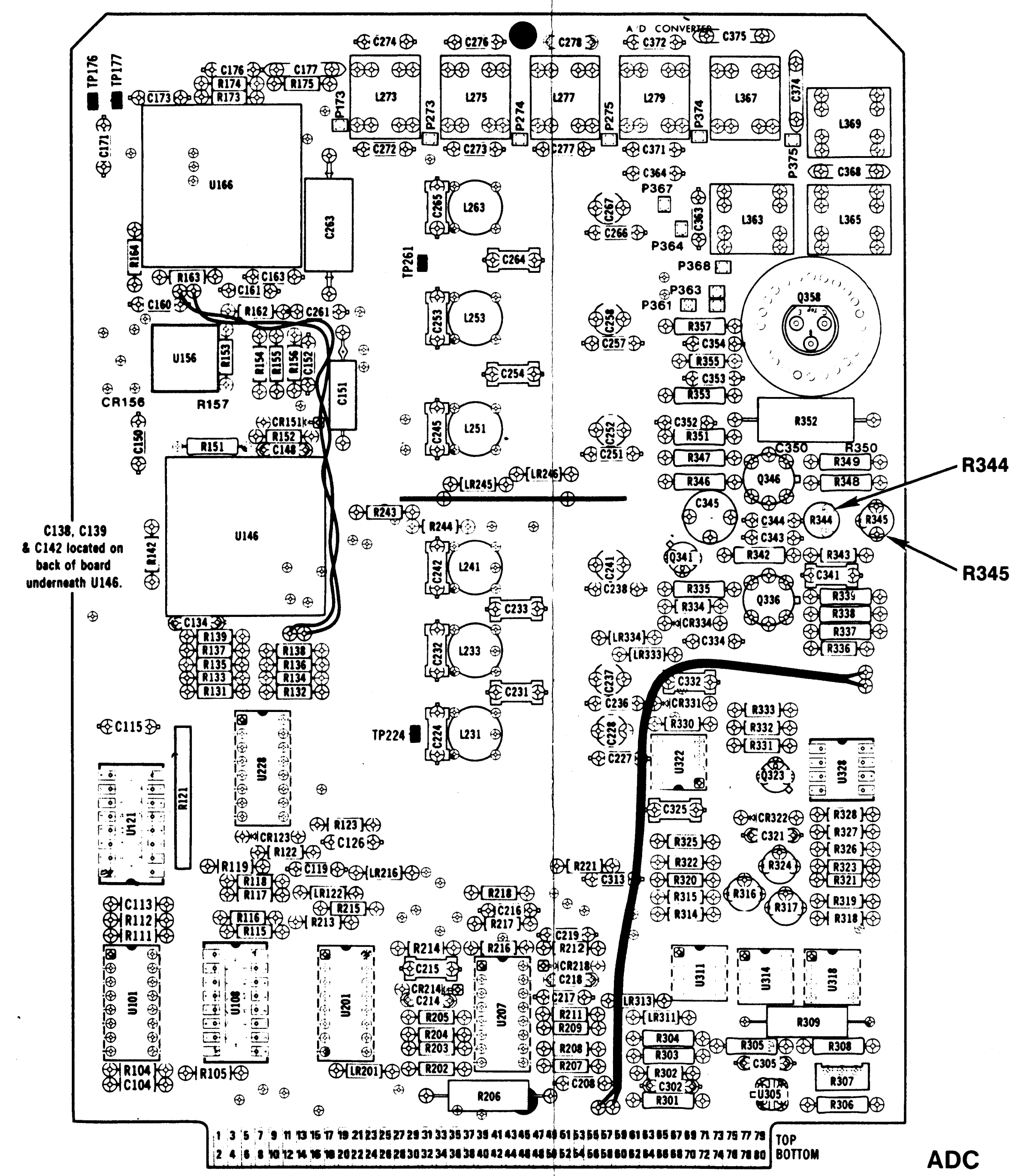


Fig. 10- 1. Adjustment locations on A16 NVM.

2921-50



ADC

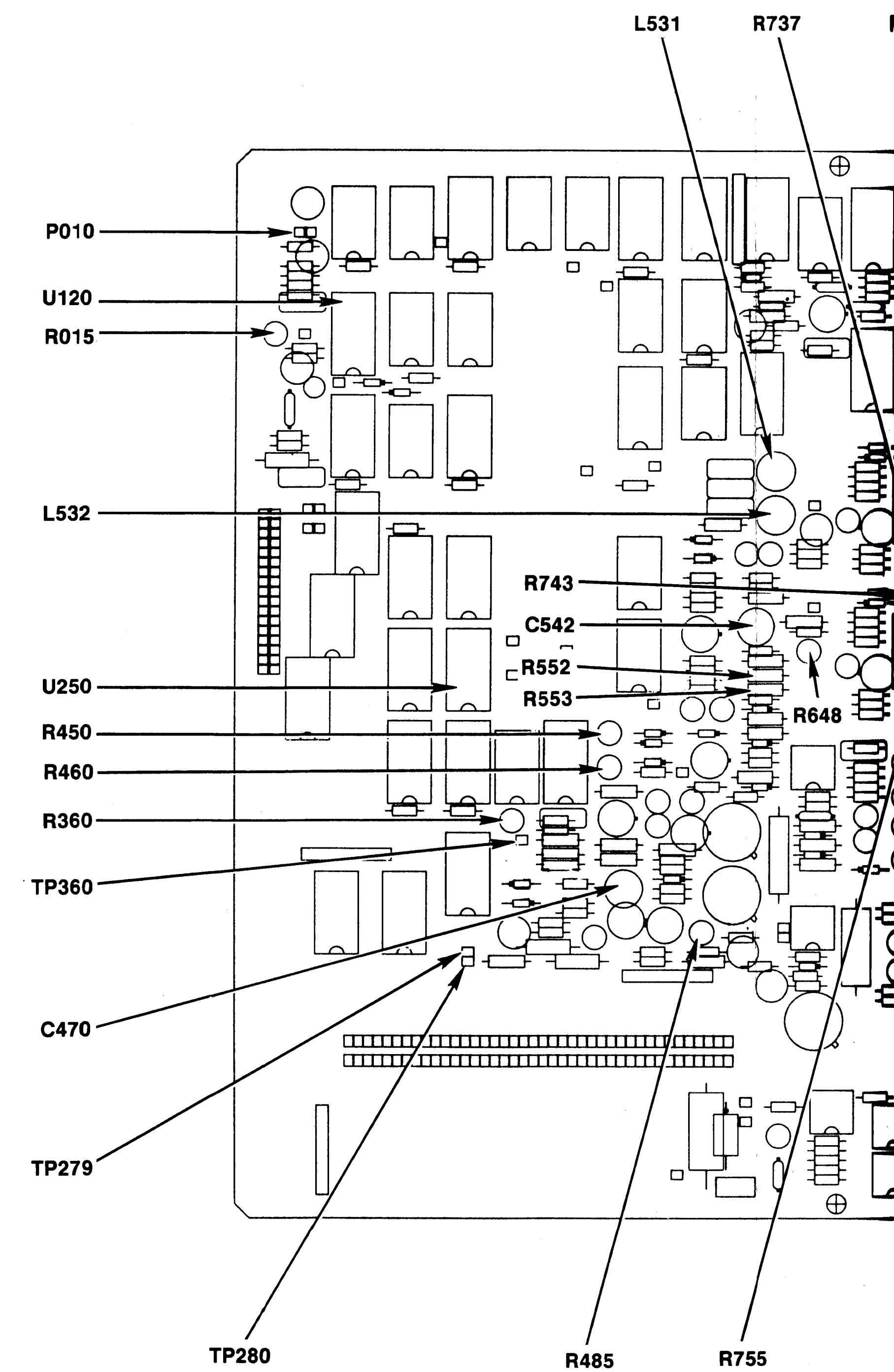
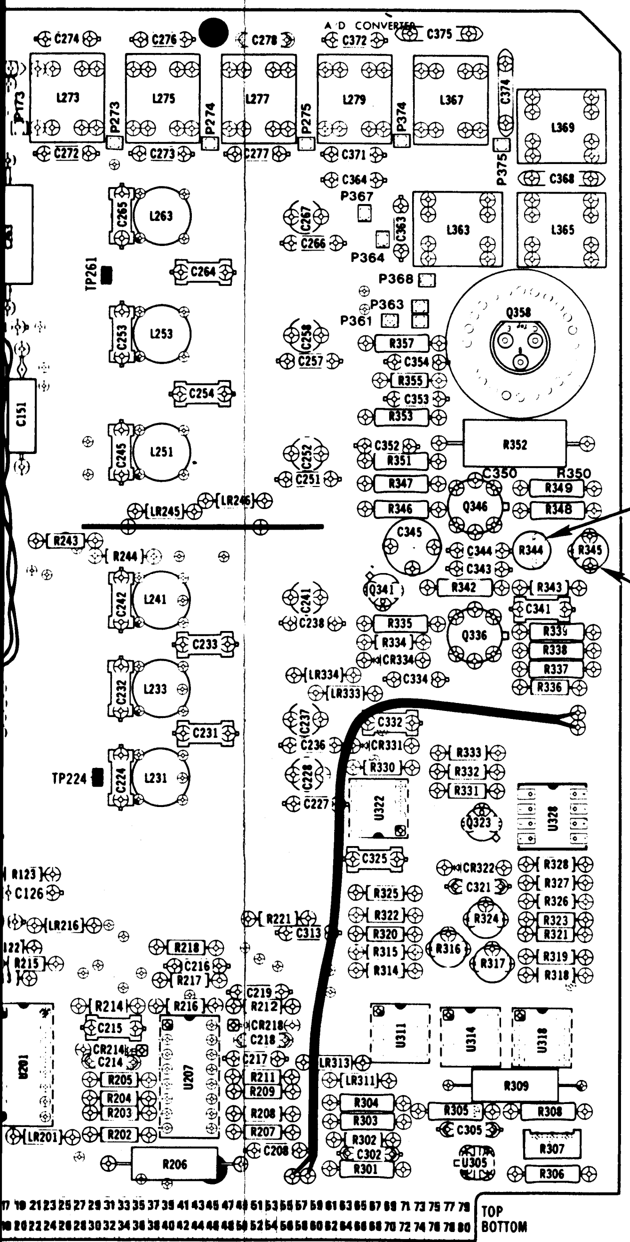


Fig. 10-2. Adjustment locations on A



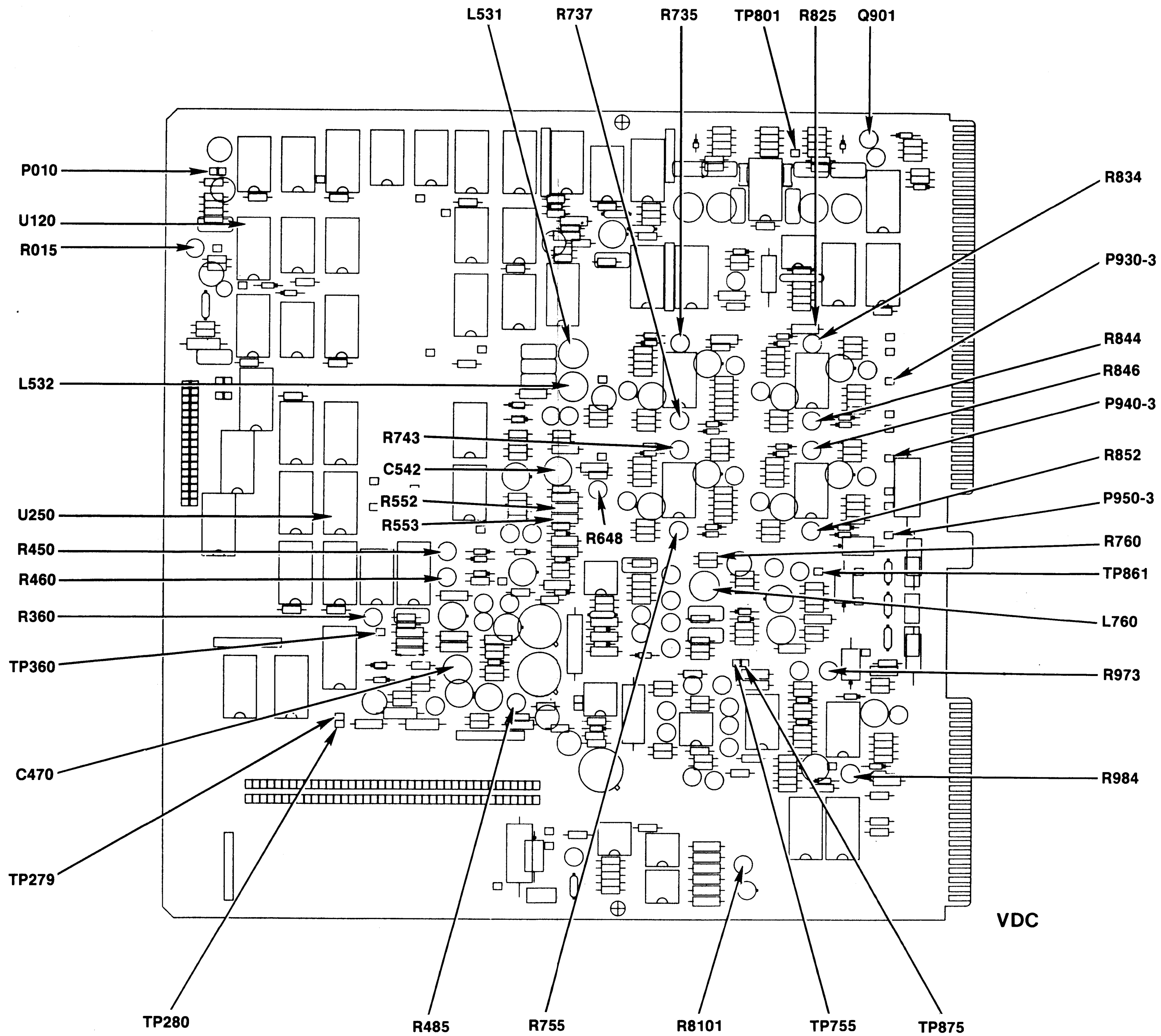


Fig. 10-2. Adjustment locations on A24 VDC & ADC.

2921-51

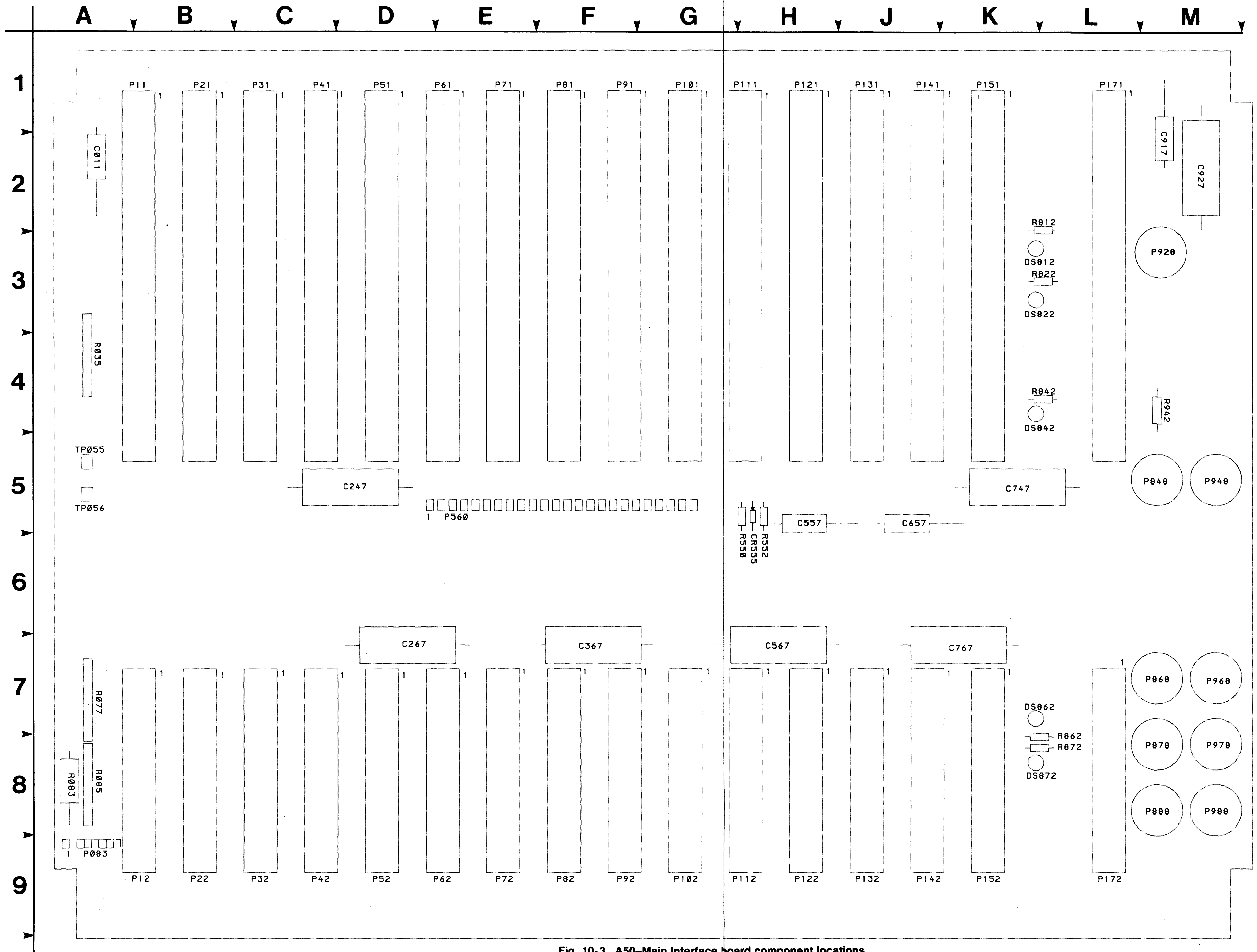


Fig. 10-3. A50–Main Interface board component locations.

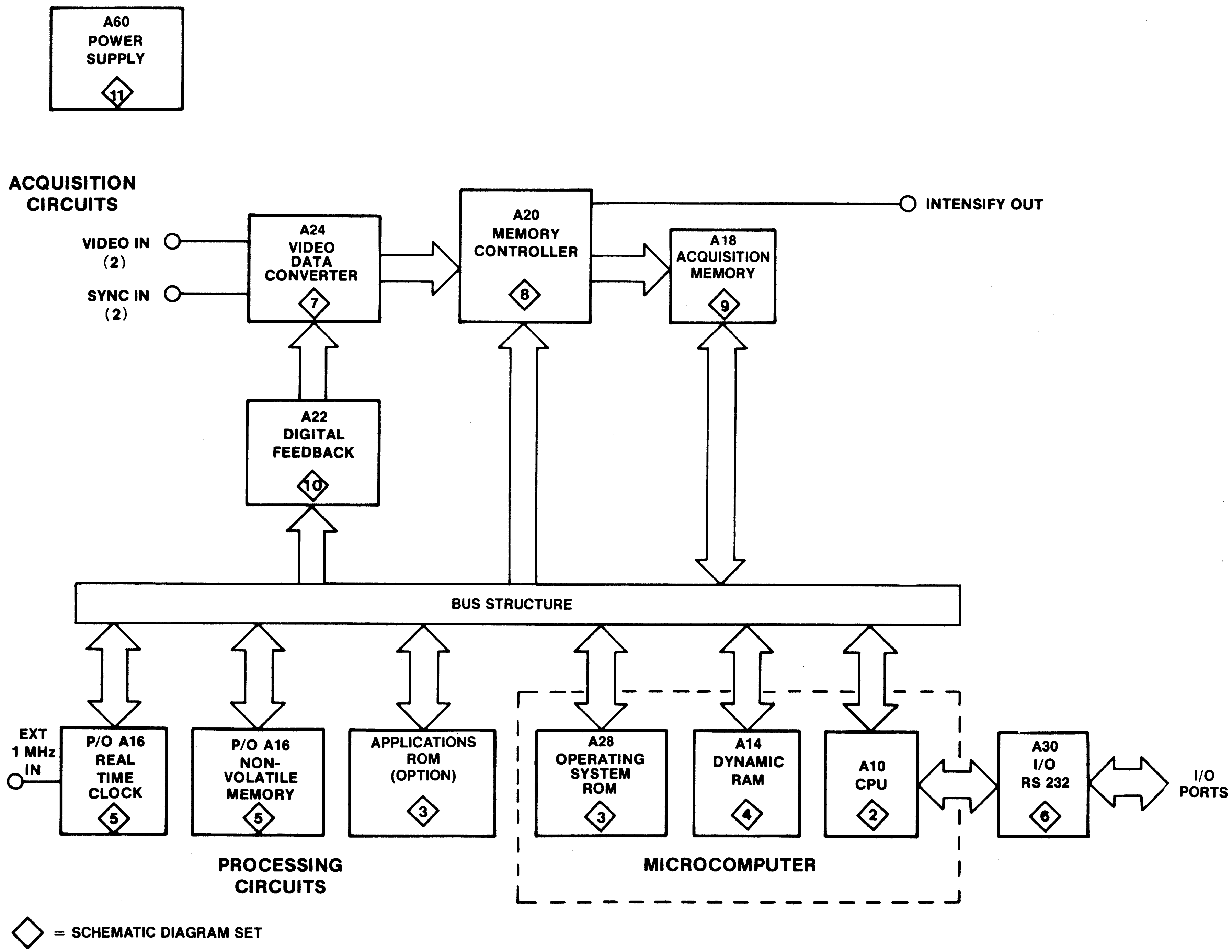
Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number
A23 A2 R1234
Assembly Number — Subassembly Number (if used) — Schematic Circuit Number

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

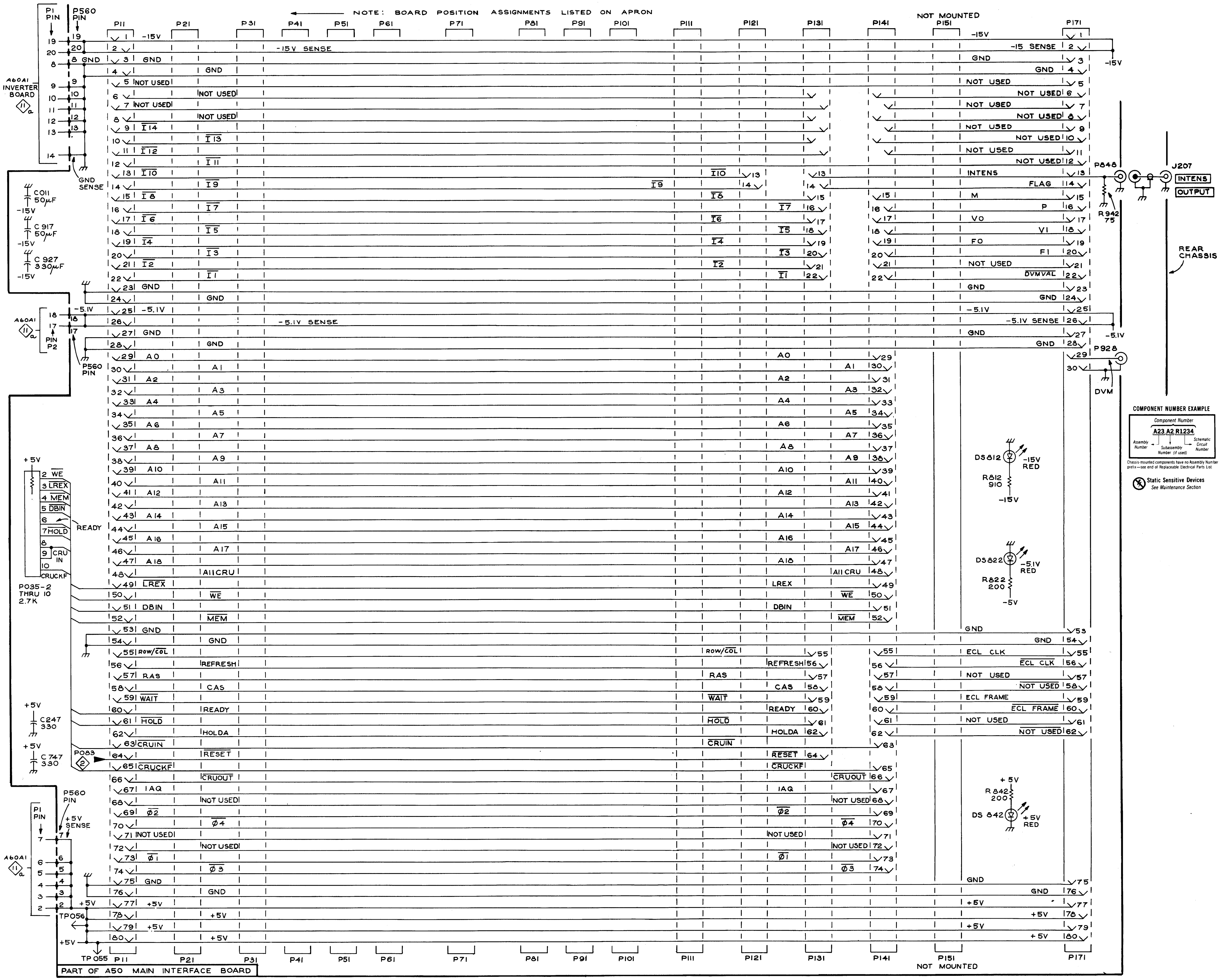
2921-52



1980 ASSEMBLY LEVEL BLOCK DIAGRAM

BOARD POSITION ASSIGNMENTS
(ALSO SEE BACK OF FRONT-PANEL DOOR)

CONNECTOR	BOARD POSITION	ASSEMBLY
P11	1	A30 I/O RS232C
P21	2	(NOT USED)
P31	3	(NOT USED)
P41	4	A28 OPERATING SYSTEM ROM
P51	5	A10 CPU
P61	6	A14 RAM
P71	7	A16 NVM
P81	8	A34 (OPT. 01) OR A42 (OPT. 03) APPLICATIONS ROM—SLOT A
P91	9	A36 (OPT. 01) OR A38 (OPT. 02)
P101	10	(NOT USED)
P111	11	(NOT USED)
P121	12	A18 ACQUISITION MEMORY
P131	13	A20 MEMORY CONTROLLER
P141	14	A22 DIGITAL FEEDBACK
P151	15	(NOT MOUNTED)
P161	16	(NOT MOUNTED)
P171	17	A24 VDC



MAIN INTERFACE (PARTIAL)
670-6412-00

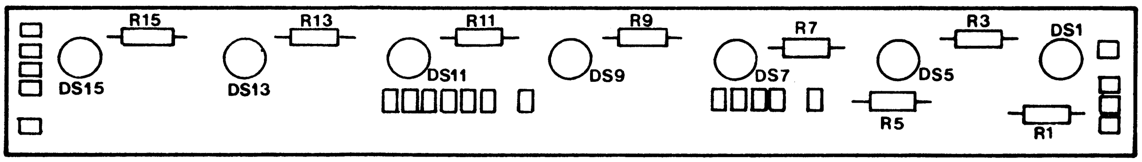
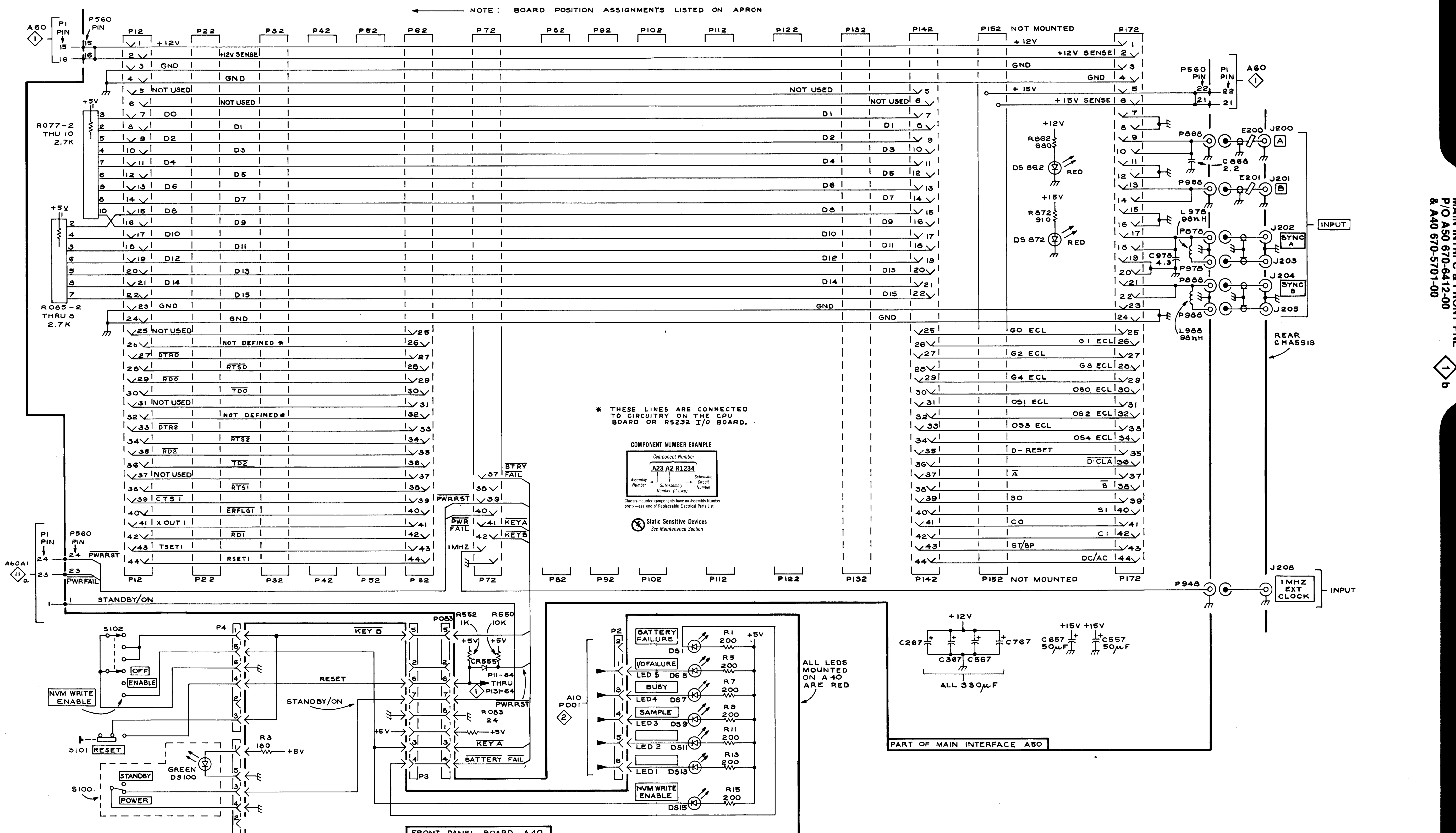


Fig. 10- 4. A40–Front Panel board component locations.

2921-53

BOARD POSITION ASSIGNMENTS
(ALSO SEE BACK OF FRONT-PANEL DOOR)

CONNECTOR	BOARD POSITION	ASSEMBLY
P12	1	A30 I/O RS232C
P22	2	(NOT USED)
P32	3	(NOT USED)
P42	4	A28 OPERATING SYSTEM ROM
P52	5	A10 CPU
P62	6	A14 RAM
P72	7	A16 NVM
P82	8	A34 (OPT. 01) OR A42 (OPT. 03) APPLICATIONS ROM—SLOT A
P92	9	A36 (OPT. 01) OR A38 (OPT. 02) APPLICATIONS ROM—SLOT B
P102	10	(NOT USED)
P112	11	(NOT USED)
P122	12	A18 ACQUISITION MEMORY
P132	13	A20 MEMORY CONTROLLER
P142	14	A22 DIGITAL FEEDBACK
P152	15	(NOT MOUNTED)
P162	16	(NOT MOUNTED)
P172	17	A24 VDC



1980

2921-102

MAIN INTERFACE (PARTIAL) & FRONT PANEL ⟨1⟩b
670-6412-00 670-5701-00

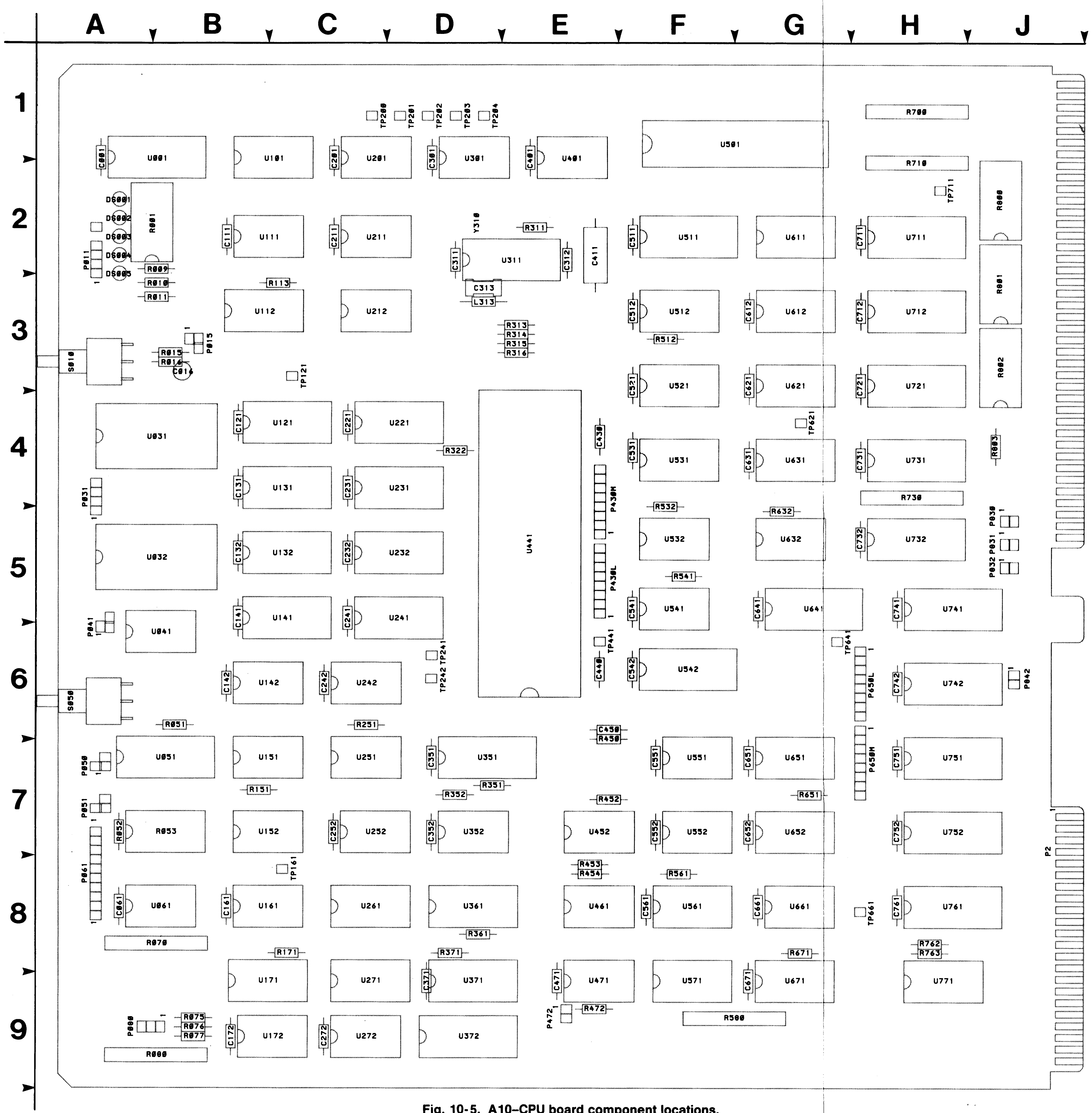
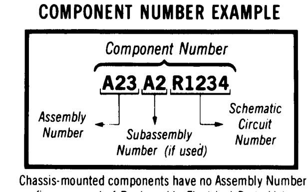


Fig. 10-5. A10–CPU board component locations.

2921-54

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

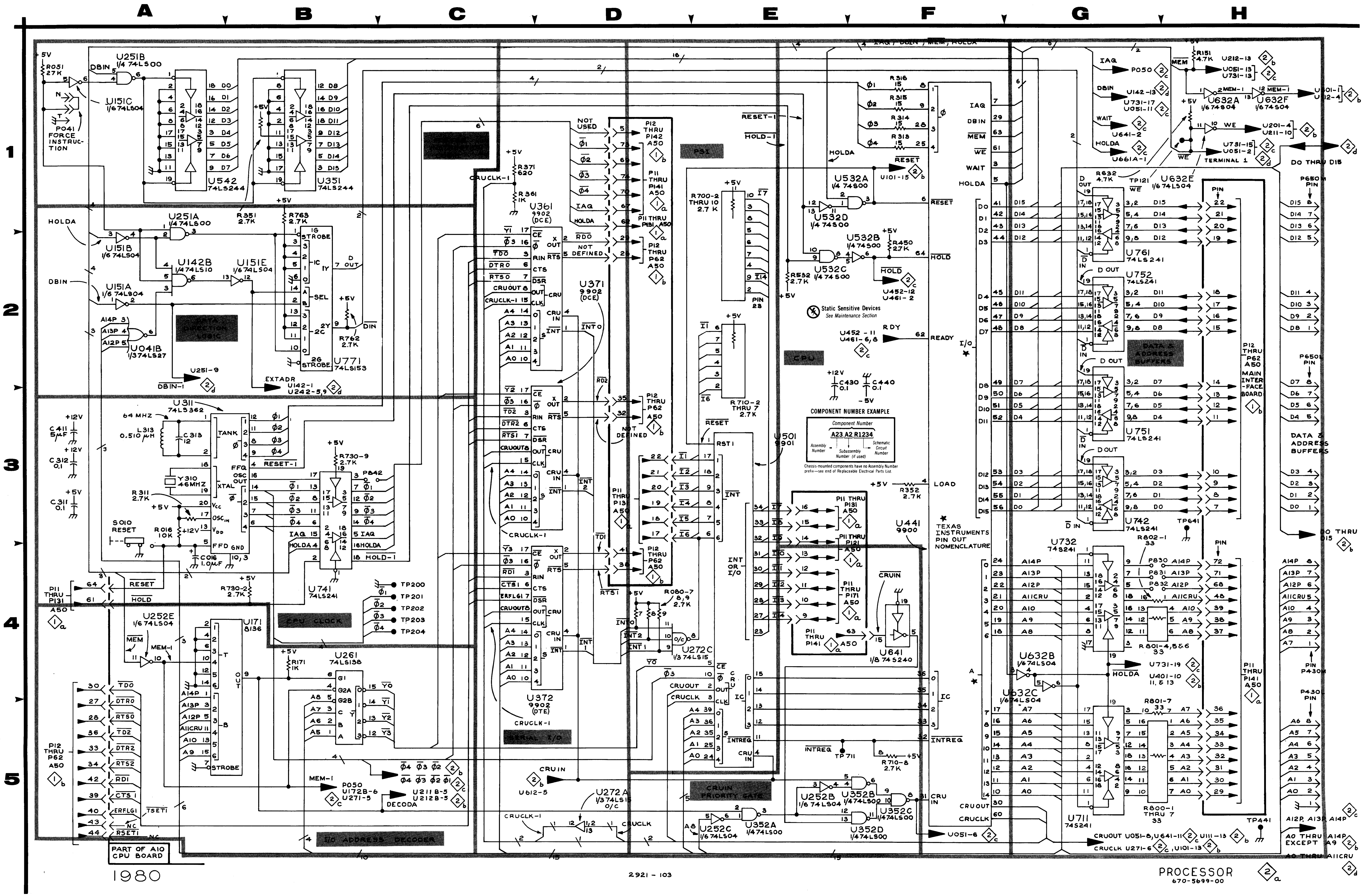


Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

PROCESSOR DIAGRAM ⟨2⟩ a

ASSEMBLY A10 *Partial A10 also shown on diagrams 2b, 2c and 2d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C16	A4	B3	R710-8	F5	H2	U252B	E5	C7
C311	A3	D2	R710-B	E3	H2	U252C	E5	C7
C312	A3	E2	R730-2	B4	H4	U252E	A4	C7
C313	A3	D3	R730-9	B3	H4	U261	B4	C8
C411	A3	E2	R762	B2	H8	U272A	D5	C9
C430	E2	E4	R763	B1	H8	U272C	D4	C9
C440	F2	E6	R800-1	G5	J2	U311	A3	E2
			R800-2	G5	J2	U351	B1	D7
L313	A3	D3	R800-3	G5	J2	U352A	E5	D7
			R800-4	G5	J2	U352B	F5	D7
P41	A1	A6	R800-5	G5	J2	U352C	F5	D7
P430L	H4	E5	R800-6	G5	J2	U352D	F5	D7
P430M	H4	E5	R800-7	G5	J2	U361	D1	D8
P650L	H2	H6	R801-4	G4	J3	U371	D2	D9
P650M	H1	H7	R801-5	G4	J3	U372	D4	D9
P830	G4	J5	R801-6	G4	J3	U441	F3	E5
P831	G4	J5	R801-7	G5	J3	U501	E3	F1
P832	G4	J5	R802-1	G4	J3	U532A	E1	F5
P842	B3	J6				U532B	F2	F5
			S10	A3	A3	U532C	E2	F5
R16	A3	B3				U532D	E1	F5
R51	A1	B6	TP121	H1	C3	U542	A1	F6
R80-7	D4	B9	TP200	C4	C1	U632A	H1	G5
R80-8	D4	B9	TP201	C4	D1	U632B	G4	G5
R80-9	D4	B9	TP202	C4	D1	U632C	G4	G5
R151	H1	B7	TP203	C4	D1	U632E	H1	G5
R171	B4	C8	TP204	C4	D1	U632F	H1	G5
R311	A3	E2	TP441	H5	E6	U641	F4	G5
R313	F1	E3	TP641	H3	G6	U711	G5	H2
R314	F1	E3	TP711	E5	H2	U732	G4	H5
R315	F1	E3				U741	B4	H5
R316	F1	E3	U41B	A2	B6	U742	G3	H6
R351	B1	D7	U142B	A2	B6	U751	G3	H7
R352	F3	D7	U151A	A2	B7	U752	G2	H7
R361	C1	D8	U151B	A2	B7	U761	G2	H8
R371	C1	D8	U151C	A1	B7	U771	B2	H9
R450	F2	E6	U151E	B2	B7			
R532	E2	F5	U171	B4	B9	Y310	A3	D2
R632	H1	G5	U251A	A1	C7			
R700-2	E1	H1	U251B	A1	C7			



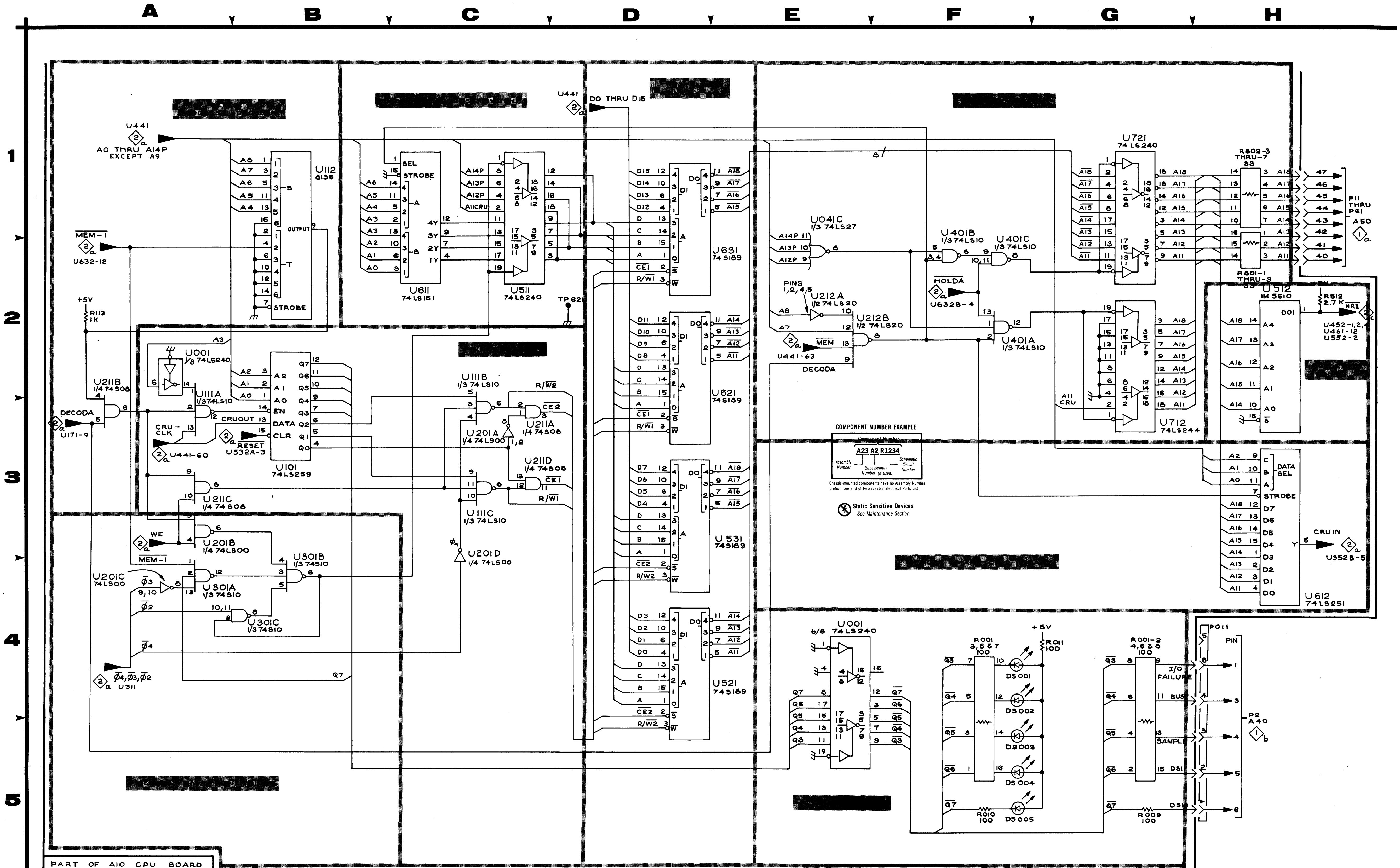
PROCESSOR
P/O A10 670-5699-00

EXTENDED MEMORY CONTROL DIAGRAM ⟨2⟩ b

ASSEMBLY A10 *Partial A10 also shown on diagrams 2a, 2c and 2d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
DS00001	F4	A2
DS2	F4	A2
DS3	F5	A2
DS4	F5	A2
DS5	F5	A2
P11	H5	A2
R1-2	G4	B2
R1-3	F4	B2
R1-4	G4	B2
R1-5	F4	B2
R1-6	G4	B2
R1-7	F4	B2
R1-8	G4	B2
R9	G5	B2
R10	F5	B3
R11	G4	B3
R113	A2	C3
R512	H2	F3
R801-1	H2	J3
R801-2	H2	J3
R801-3	H2	J3
R802-3	H1	J3
R802-4	H1	J3
R802-5	H1	J3
R802-6	H1	J3
R802-7	H1	J3
TP621	D2	G4
U1	A2	B2
U1	E4	B2

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
U41C	E1	B6
U101	B3	B2
U111A	A3	B2
U111B	C3	B2
U111C	C3	B2
U112	B1	B3
U201A	C3	C1
U201B	A3	C1
U201C	A4	C1
U201D	B4	C1
U211A	C3	C2
U211B	A2	C2
U211C	A3	C2
U211D	C3	C2
U212A	E2	C3
U212B	E2	C3
U301A	A4	D2
U301B	B4	D2
U301C	B4	D2
U401A	F2	E1
U401B	F2	E1
U401C	F2	E1
U511	C2	F2
U512	H2	F3
U521	D4	F3
U531	D3	F4
U611	C2	G2
U612	H4	G3
U621	D2	G3
U631	D2	G4
U712	G3	H3
U721	G1	H3



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EXTENDED MEMORY CONTROL

670-5699-00

EXTENDED MEMORY CONTROL
P/O A10 670-5699-00

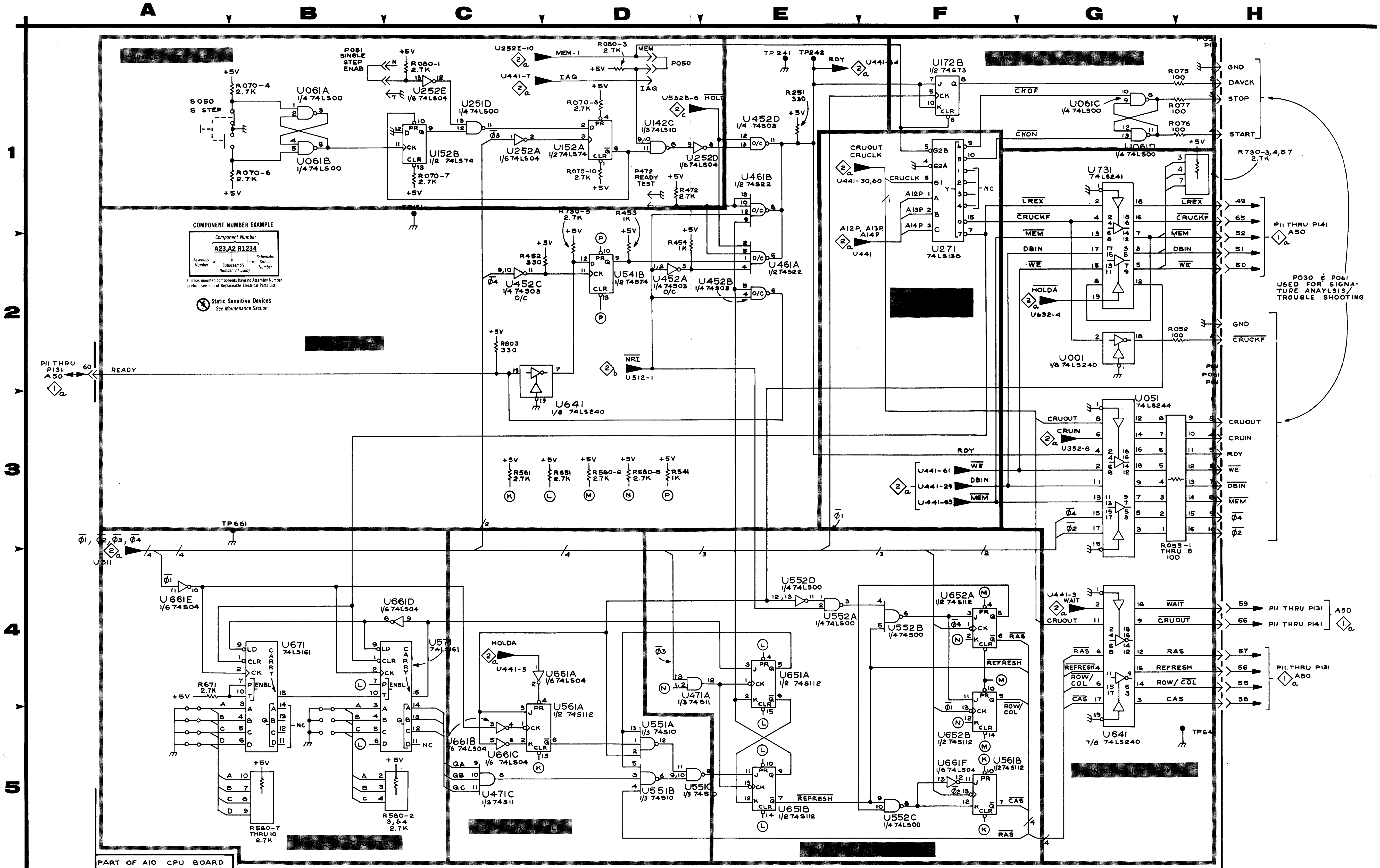
DYNAMIC RAM DRIVE DIAGRAM 2 c

ASSEMBLY A10 *Partial A10 also shown on diagrams 2a, 2b and 2d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P31	H1	A4
P50	D1	A7
P51	B1	A7
P61	H2	A8
P472	D1	E9
R52	G2	A7
R53-1	H3	B7
R53-2	H3	B7
R53-3	H3	B7
R53-4	H3	B7
R53-5	H3	B7
R53-6	H3	B7
R53-7	H3	B7
R53-8	H3	B7
R70-10	D1	B8
R70-4	B1	B8
R70-6	B1	B8
R70-8	D1	B8
R75	G1	B9
R76	G1	B9
R77	G1	B9
R80-1	C1	B9
R80-3	D1	B9
R251	E1	C6
R452	C2	E7
R453	D2	E8
R454	D2	E8
R472	D1	E9
R541	D3	F5
R561	C3	F8
R580-2	C5	F9
R580-3	C5	F9
R580-4	C5	F9
R580-5	D3	F9

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R580-6	D3	F9
R580-7	B5	F9
R580-8	B5	F9
R580-9	B5	F9
R580-10	B5	F9
R651	D3	G7
R671	A4	G8
R730-3	H1	H4
R730-4	H1	H4
R730-5	D2	H4
R730-7	H1	H4
R803	E2	J4
S50	A1	A6
TP161	C1	C8
TP241	E1	D6
TP242	E1	D6
TP641	E1	D6
TP661	B3	H8
U1	G2	B2
U51	G3	B7
U61A	B1	B8
U61B	B1	B8
U61C	G1	B8
U61D	G1	B8
U142C	D1	B6
U152A	D1	B7
U152B	C1	B7
U172A	F1	B9
U251D	C1	C7
U252A	C1	C7
U252D	D1	C7
U252E	C1	C7

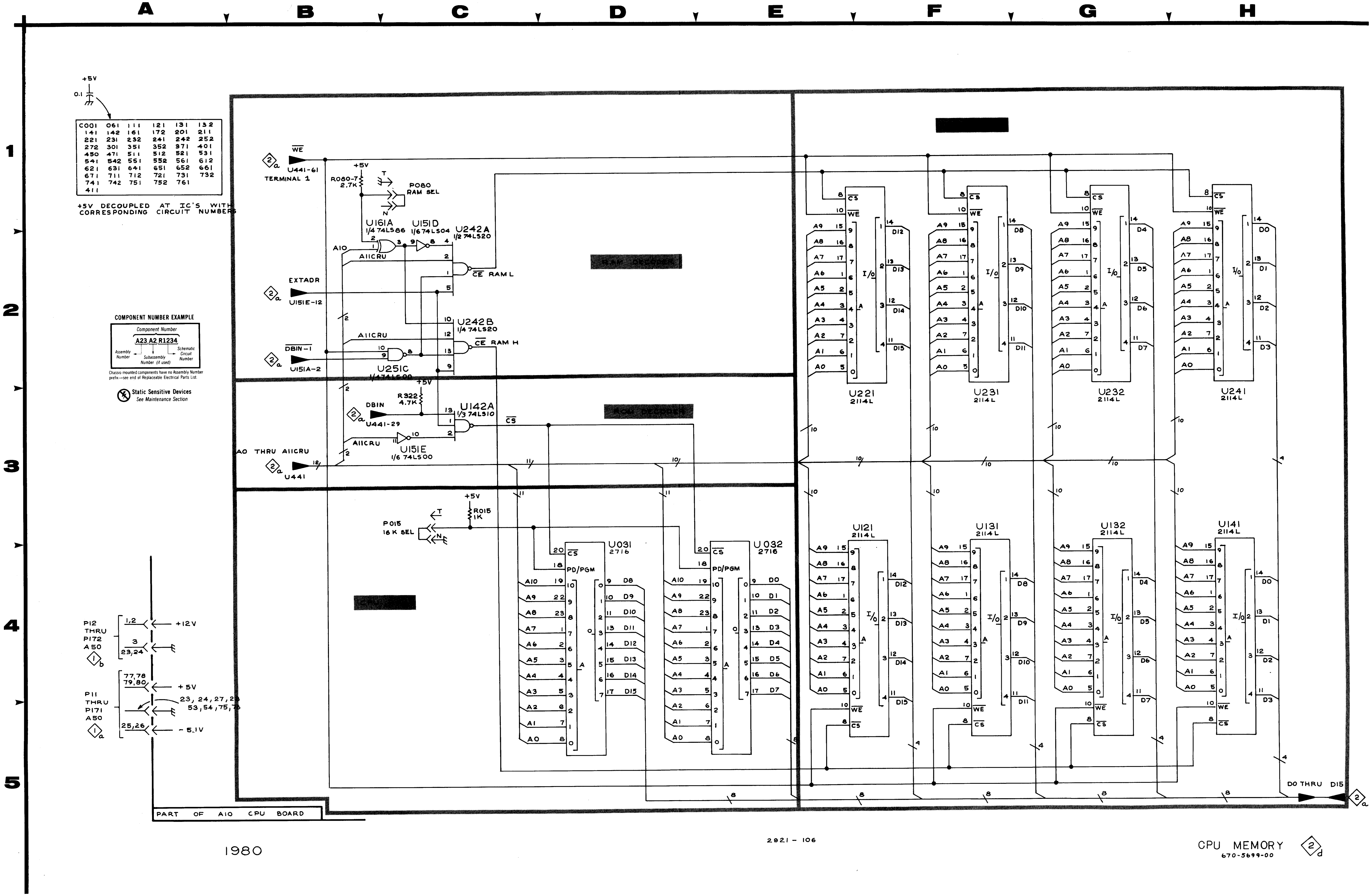
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
U271	F1	C9
U452A	D2	E7
U452B	E2	E7
U452C	C2	E7
U452D	E1	E7
U461A	E2	E8
U461B	E1	E8
U471A	D4	E9
U471C	C5	E9
U541B	D2	F5
U551A	D5	F7
U551B	D5	F7
U551C	D5	F7
U552A	E4	F7
U552B	F4	F7
U552C	F5	F7
U552D	E4	F7
U561A	D5	F8
U561B	F5	F8
U571	C4	F9
U641	D2	G5
U641	G5	G5
U651A	E4	G7
U651B	E5	G7
U652A	F4	G7
U652B	F5	G7
U661A	D4	G8
U661B	C5	G8
U661C	C5	G8
U661D	C4	G8
U661E	A4	G8
U661F	F5	G8
U671	B4	G9
U731	G1	H4


A
B
C
D
E
F
G
H
1
2
3
4
5
PART OF A10 CPU BOARD
COMPONENT NUMBER EXAMPLE
Static Sensitive Devices
See Maintenance Section
U061A
U061B
U152B
U252E
U251D
U252A
U152A
U142C
U252D
U452D
U461B
U461A
U452C
U541B
U452A
U452B
U641
U172B
U271
U731
U001
U051
U661E
U671
U661D
U571
U661A
U561A
U661B
U661C
U471C
U551A
U551B
U551C
U552D
U552A
U471A
U651A
U651B
U552B
U652A
U652B
U552C
U661F
U561B
READY
PII THRU P131 A50
PII THRU P141 A50
P030 & P061 USED FOR SIGNATURE ANALYSIS/TROUBLE SHOOTING
GND
DAVCK
STOP
START
CRUOUT
CRUIN
RDY
WE
DBIN
MEM
RAS
REFRESH
ROW/COL
CAS
WAIT

CPU MEMORY DIAGRAM ⟨2⟩ d

ASSEMBLY A10 *Partial A10 also shown on diagrams 2a, 2b and 2c*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	A1	A2	C651	A1	G7
C61	A1	A8	C652	A1	G7
C111	A1	B2	C661	A1	G8
C121	A1	B4	C671	A1	G9
C131	A1	B4	C711	A1	H2
C132	A1	B5	C712	A1	H3
C141	A1	B5	C721	A1	H3
C142	A1	B6	C731	A1	H4
C161	A1	B8	C732	A1	H5
C172	A1	B9	C741	A1	H5
C201	A1	C1	C742	A1	H6
C211	A1	C2	C751	A1	H7
C221	A1	C4	C752	A1	H7
C231	A1	C4	C761	A1	H8
C232	A1	C5			
C241	A1	C5	P15	C3	B3
C242	A1	C6	P80	C1	A9
C252	A1	C7			
C272	A1	C9	R15	C3	B3
C301	A1	D2	R80-7	B1	B9
C351	A1	D7	R322	C3	D4
C352	A1	D7			
C371	A1	D9	U31	D4	B4
C401	A1	E1	U32	E4	B5
C450	A1	E6	U121	F4	C4
C471	A1	E9	U131	F4	C4
C511	A1	F2	U132	G4	C5
C512	A1	F3	U141	H4	C5
C521	A1	F3	U142A	C3	B6
C531	A1	F4	U151D	C2	B7
C541	A1	F5	U151E	C3	B7
C542	A1	F6	U161A	C2	B8
C551	A1	F7	U221	F2	D4
C552	A1	F7	U231	F2	D4
C561	A1	F8	U232	G2	D5
C612	A1	G3	U241	H2	D5
C621	A1	G3	U242A	C2	C6
C631	A1	G4	U242B	C2	C6
C641	A1	G5	U251C	C2	C7



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CPU MEMORY 670-5699-00

CPU MEMORY P/O A10 670-5699-00

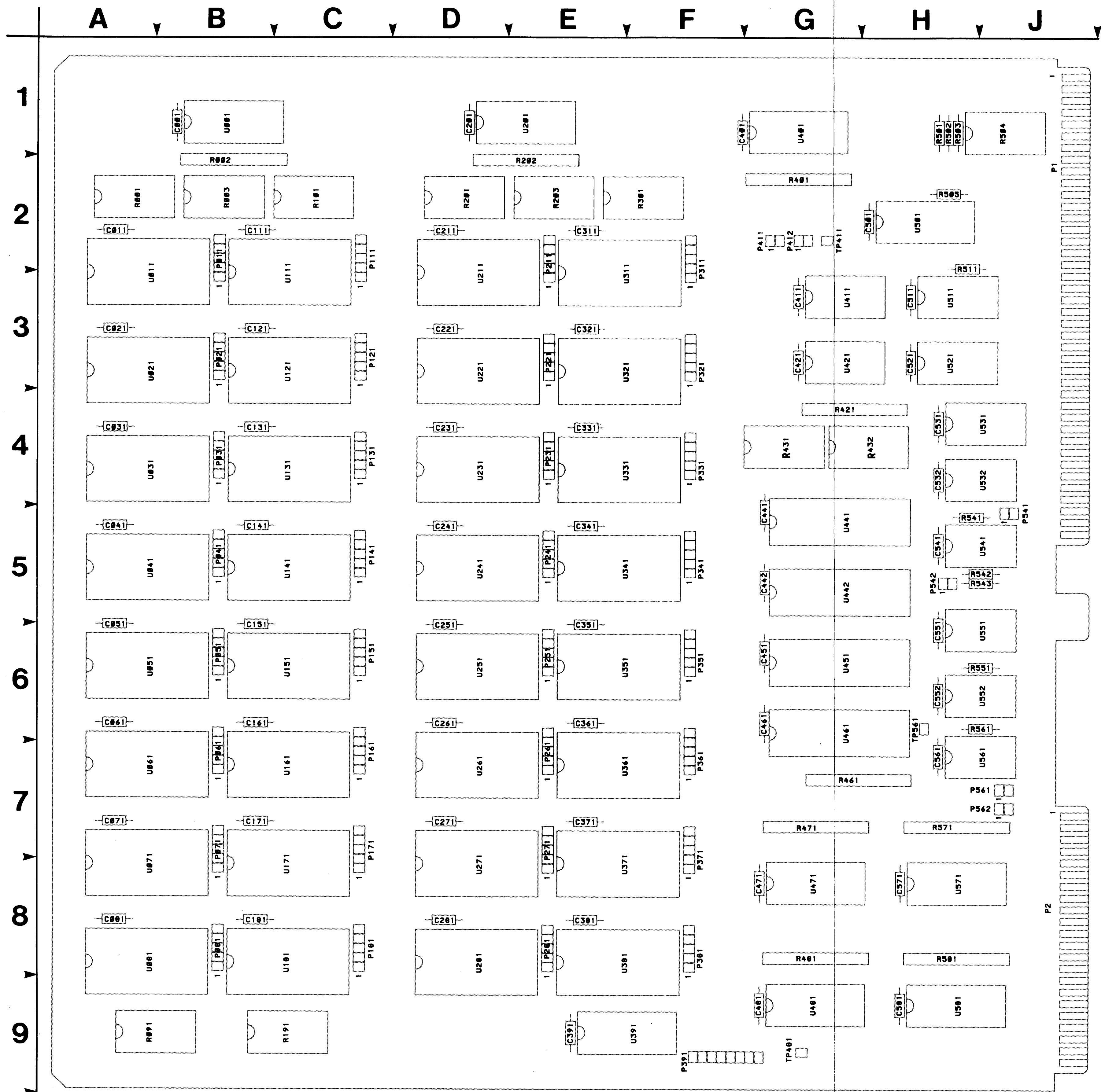


Fig. 10-6. A28–ROM/PROM board component locations.

2921-55

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number: A23 A2 R1234 — Assembly Number (A23), Subassembly Number (if used) (A2), Schematic Circuit Number (R1234)

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

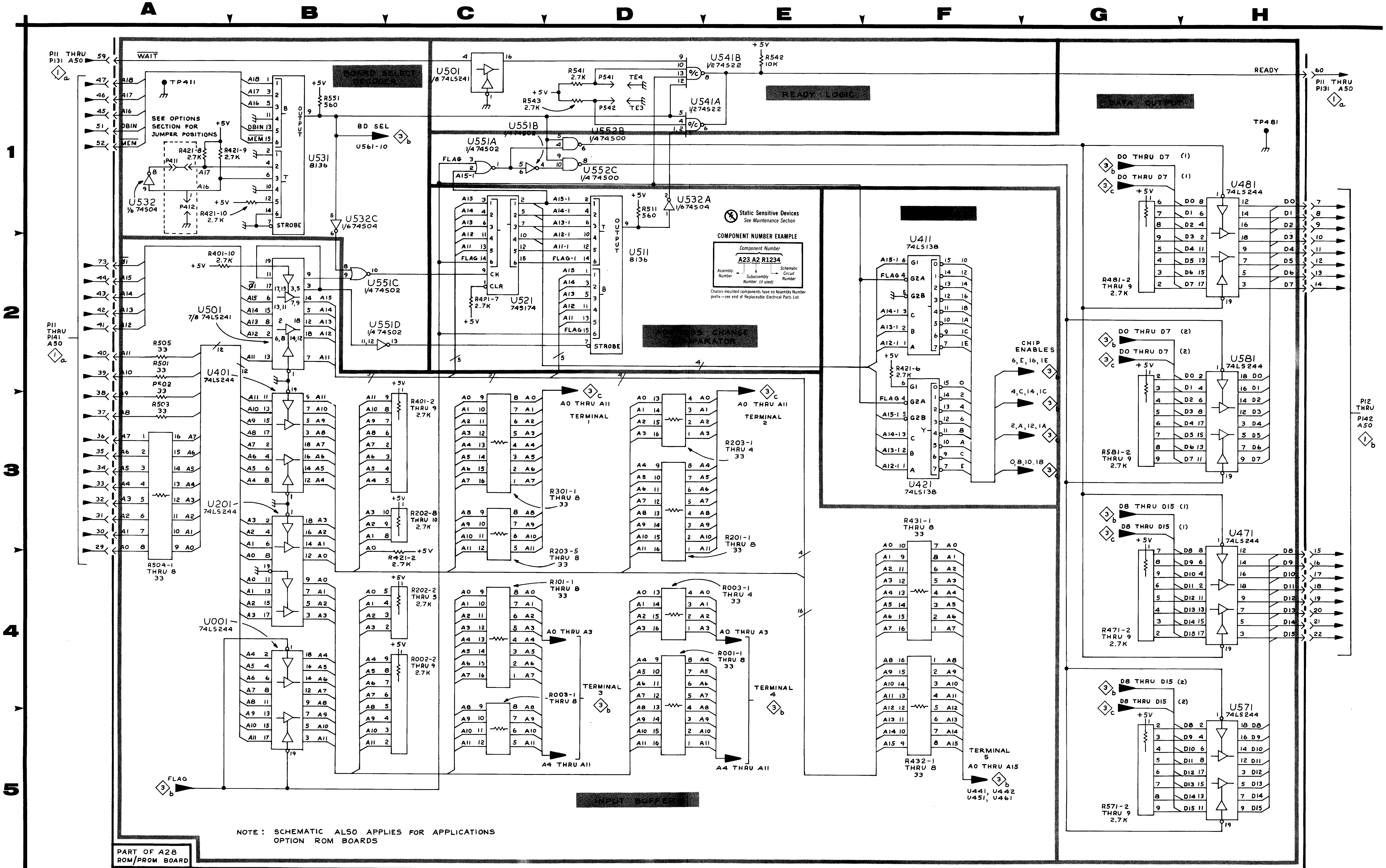
ROM BUFFERS AND CONTROL DIAGRAM ⟨3⟩ a

ASSEMBLY A28 *Partial A28 also shown on diagrams 3b and 3c*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P411	A1	G2
P412	A1	G2
P541	D1	J5
P542	D1	H5
R1-1	D4	A2
R1-2	D4	A2
R1-3	D4	A2
R1-4	D4	A2
R1-5	D4	A2
R1-6	D4	A2
R1-7	D4	A2
R1-8	D4	A2
R2-2	B3	B2
R2-3	B3	B2
R2-4	B3	B2
R2-5	B3	B2
R2-6	B3	B2
R2-7	B3	B2
R2-8	B3	B2
R2-9	B3	B2
R3-1	D4	B2
R3-2	D4	B2
R3-3	D4	B2
R3-4	D4	B2
R3-5	C5	B2
R3-6	C5	B2
R3-7	C5	B2
R3-8	C5	B2
R101-1	B3	C2
R101-2	B3	C2
R101-3	B3	C2
R101-4	B3	C2
R101-5	B3	C2
R101-6	B3	C2
R101-7	B3	C2
R101-8	B3	C2
R201-1	D3	D2
R201-2	D3	D2
R201-3	D3	D2
R201-4	D3	D2
R201-5	D3	D2
R201-6	D3	D2
R201-7	D3	D2
R201-8	D3	D2
R202-2	B3	E2
R202-3	B3	E2
R202-4	B3	E2
R202-5	B3	E2
R202-8	B3	E2
R202-9	B3	E2
R203-1	D3	E2
R203-2	D3	E2
R203-3	D3	E2
R203-4	D3	E2
R203-5	B3	E2
R203-6	B3	E2
R203-7	B3	E2
R203-8	B3	E2

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R301-1	B3	F2
R301-2	B3	F2
R301-3	B3	F2
R301-4	B3	F2
R301-5	B3	F2
R301-6	B3	F2
R301-7	B3	F2
R301-8	B3	F2
R401-2	B3	G2
R401-3	B3	G2
R401-4	B3	G2
R401-5	B3	G2
R401-6	B3	G2
R401-7	B3	G2
R401-8	B3	G2
R401-9	B3	G2
R401-10	A2	G2
R421-2	B3	G4
R421-6	F2	G4
R421-7	B2	G4
R421-8	A1	G4
R421-9	A1	G4
R421-10	B1	G4
R431-1	F3	G4
R431-2	F3	G4
R431-3	F3	G4
R431-4	F3	G4
R431-5	F3	G4
R431-6	F3	G4
R431-7	F3	G4
R431-8	F3	G4
R432-1	F5	H4
R432-2	F5	H4
R432-3	F5	H4
R432-4	F5	H4
R432-5	F5	H4
R432-6	F5	H4
R432-7	F5	H4
R432-8	F5	H4
R471-2	G4	G6
R471-3	G4	G6
R471-4	G4	G6
R471-5	G4	G6
R471-6	G4	G6
R471-8	G4	G6
R471-9	G4	G6
R481-2	G2	G8
R481-3	G2	G8
R481-4	G2	G8
R481-5	G2	G8
R481-6	G2	G8
R481-7	G2	G8
R481-8	G2	G8
R481-9	G2	G8
R501	A2	H1
R502	A2	H1
R503	A3	H1
R504-1	A3	J1
R504-2	A3	J1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R504-3	A3	J1
R504-4	A3	J1
R504-5	A3	J1
R504-6	A3	J1
R504-7	A3	J1
R504-8	A3	J1
R505	A2	H2
R511	D1	H2
R541	D1	H5
R542	E1	J5
R543	D1	J5
R551	B1	J6
R571-2	G5	H7
R571-3	G5	H7
R571-4	G5	H7
R571-5	G5	H7
R571-6	G5	H7
R571-7	G5	H7
R571-8	G5	H7
R571-9	G5	H7
R581-2	G3	H8
R581-3	G3	H8
R581-4	G3	H8
R581-5	G3	H8
R581-6	G3	H8
R581-7	G3	H8
R581-8	G3	H8
R581-9	G3	H8
TP411	A1	G2
TP481	H1	G9
U1	B4	B1
U201	B3	E1
U401	B3	G1
U411	F2	G3
U421	F3	G3
U471	H3	G8
U481	H1	G9
U501	B2	H2
U501	C1	H2
U511	D2	H3
U521	B2	H3
U531	B1	J4
U532A	D1	J4
U532C	B1	J4
U532D	A1	J4
U541A	D1	J5
U541B	D1	J5
U551A	C1	J6
U551B	C1	J6
U551C	B2	J6
U551D	B2	J6
U552B	D1	J6
U552C	D1	J6
U571	H5	H8
U581	H2	H9



ROM BUFFERS & CONTROL
P/O A28 670-6316-00

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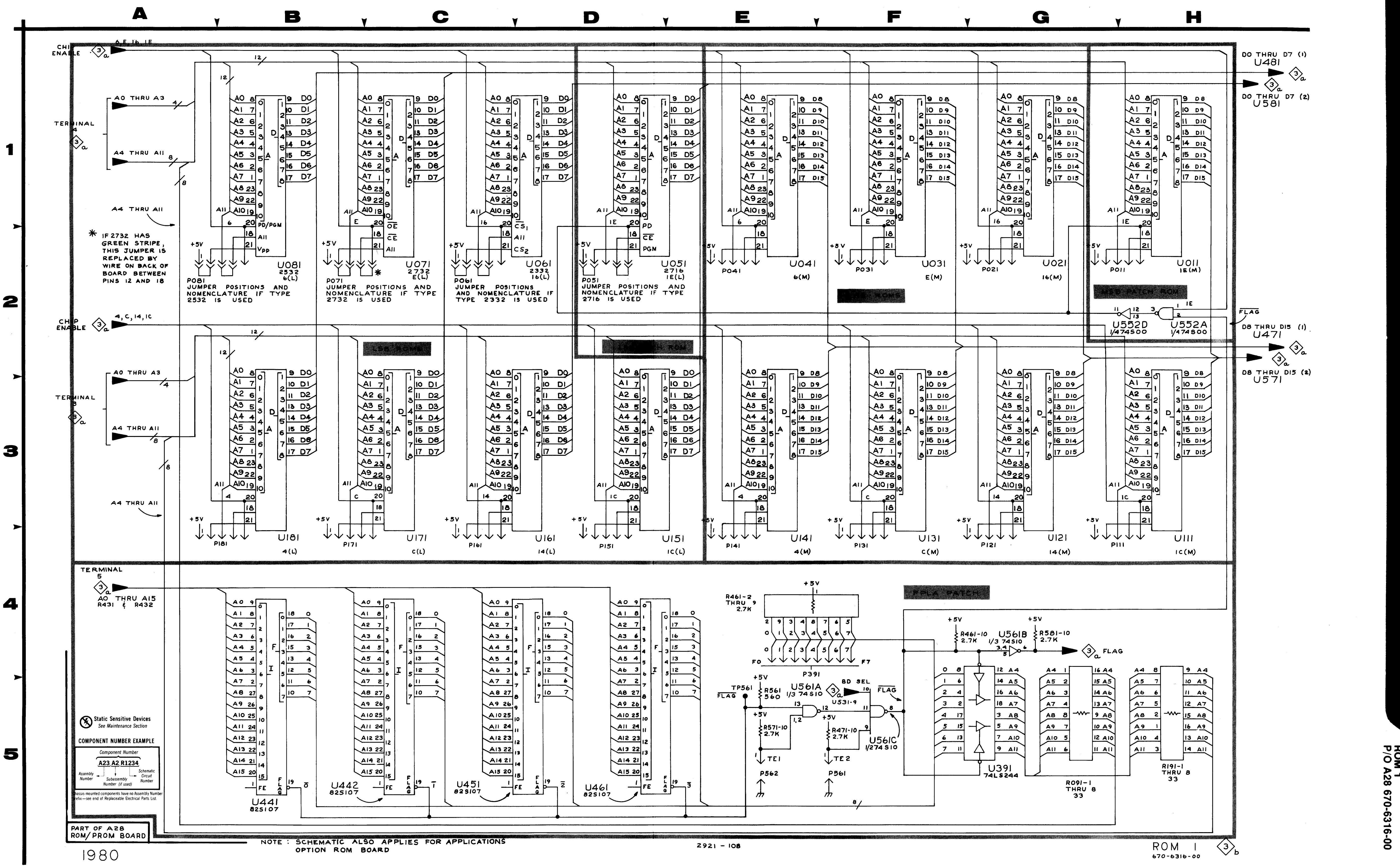
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ROM BUFFERS AND CONTROL
670-6316-00

ROM (1) DIAGRAM ③ b

ASSEMBLY A28 *Partial A28 also shown on diagrams 3a and 3c*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P11	G2	B2	R461-4	E4	G6
P21	G2	B3	R461-5	E4	G6
P31	F2	B4	R461-6	E4	G6
P41	E2	B5	R461-7	E4	G6
P51	D2	B6	R461-8	E4	G6
P61	C2	B7	R461-10	F4	G6
P71	B2	B7	R471-10	F5	G6
P81	A2	B8	R561	E5	J6
P111	G4	C2	R571-10	E5	H7
P121	G4	C3	R581-10	G4	H8
P131	F4	C4			
P141	E4	C5	TP561	E5	H6
P151	D4	C6			
P161	C4	C7	U11	H2	A2
P171	B4	C7	U21	G2	A3
P181	B4	C8	U31	F2	A4
P391	E4	F9	U41	E2	A5
P561	F5	J7	U51	D2	A6
P562	E5	J7	U61	D2	A7
			U71	C2	A8
R91-1	G5	A9	U81	B2	A8
R91-2	G5	A9	U111	H3	C2
R91-3	G5	A9	U121	G3	C3
R91-4	G5	A9	U131	F3	C4
R91-5	G5	A9	U141	E3	C5
R91-6	G5	A9	U151	D3	C6
R91-7	G5	A9	U161	D3	C7
R91-8	G5	A9	U171	C3	C8
R191-1	H5	C9	U181	B3	C8
R191-2	H5	C9	U391	G5	F9
R191-3	H5	C9	U441	B5	G5
R191-4	H5	C9	U442	C5	G5
R191-5	H5	C9	U451	D5	G6
R191-6	H5	C9	U461	D5	G6
R191-7	H5	C9	U552A	H2	J6
R191-8	H5	C9	U552D	H2	J6
R461-2	E4	G6	U561A	E5	J7
R461-3	E4	G6	U561B	G4	J7
			U561C	F5	J7



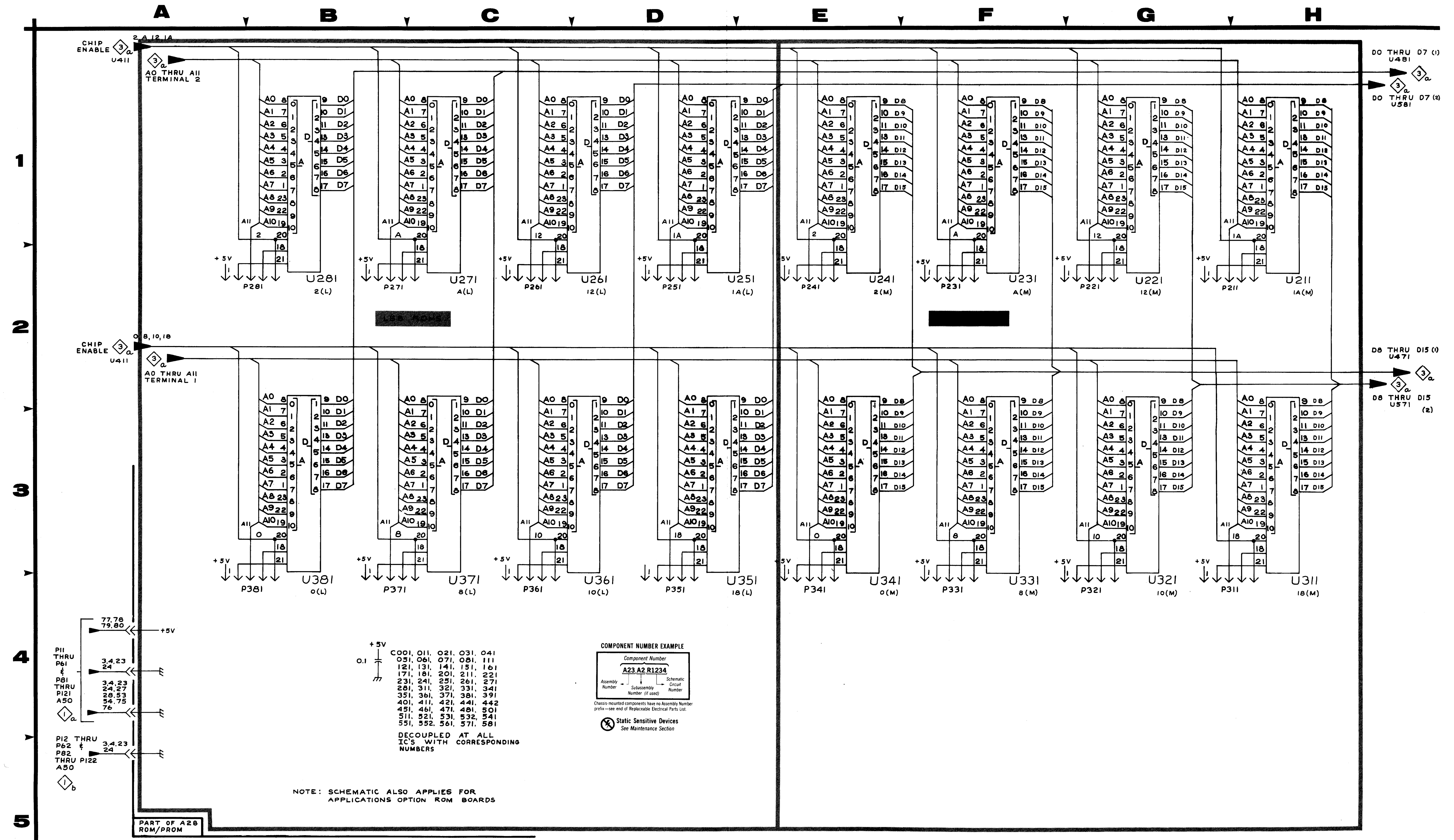
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ROM 1
P/O A28 670-6316-00

ROM (2) DIAGRAM ⟨3⟩ c

ASSEMBLY A28 *Partial A28 also shown on diagrams 3a and 3b*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	C3	B1	C511	C3	H3
C11	C3	A2	C521	C3	H3
C21	C3	A3	C531	C3	H4
C31	C3	A4	C532	C3	H4
C41	C3	A5	C541	C3	H5
C51	C3	A6	C551	C3	H6
C61	C3	A6	C552	C3	H6
C71	C3	A7	C561	C3	H7
C81	C3	A8	C571	C3	H8
C111	C3	B2	C581	C3	H9
C121	C3	B3			
C131	C3	B4	P211	G2	E2
C141	C3	B5	P221	G2	F3
C151	C3	B6	P231	F2	E4
C161	C3	B6	P241	E2	E5
C171	C3	B7	P251	D2	E6
C181	C3	B8	P261	C2	E7
C201	C3	D1	P271	B2	E7
C211	C3	D2	P281	B2	E8
C221	C3	D3	P311	G3	F2
C231	C3	D4	P321	G3	F3
C241	C3	D5	P331	F3	F4
C251	C3	D6	P341	E3	F5
C261	C3	D6	P351	D3	F6
C271	C3	D7	P361	C3	F7
C281	C3	D8	P371	B3	F8
C311	C3	E2	P381	B3	F8
C321	C3	F3			
C331	C3	E4	U211	H2	D2
C341	C3	E5	U221	G2	D3
C351	C3	E6	U231	F2	D4
C361	C3	E6	U241	E2	D5
C371	C3	E7	U251	D2	D6
C381	C3	E8	U261	D2	D7
C391	C3	E9	U271	C2	D8
C401	C3	G1	U281	B2	D8
C411	C3	G3	U311	H3	E2
C421	C3	G3	U321	G3	F3
C441	C3	G5	U331	F3	E4
C442	C3	G5	U341	E3	E5
C451	C3	G6	U351	D3	E6
C461	C3	G6	U361	D3	E7
C471	C3	G8	U371	C3	E8
C481	C3	G9	U381	B3	E8
C501	C3	H2			



2921-109

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ROM 2
670-6316-00

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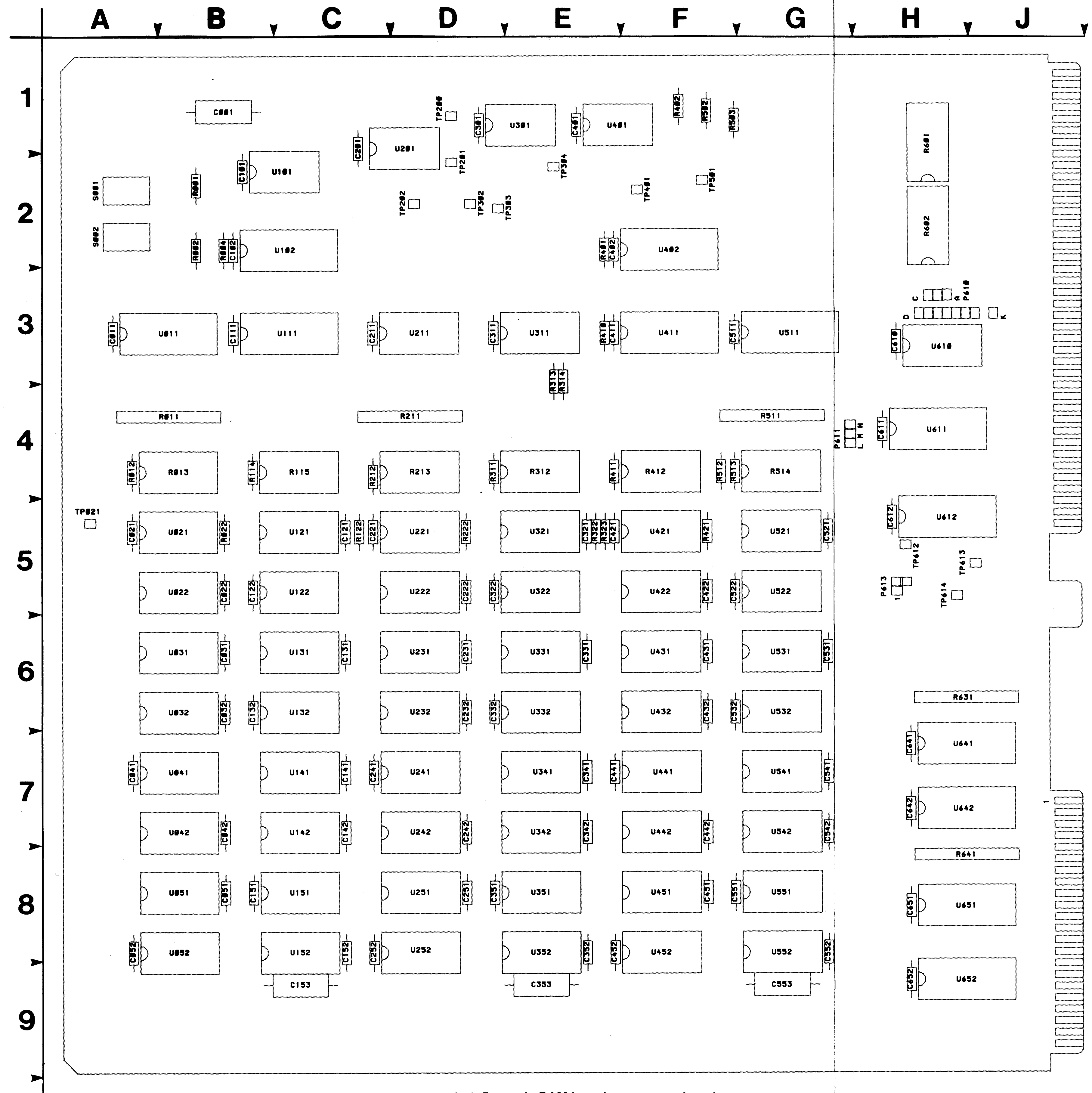


Fig. 10-7. A14–Dynamic RAM board component locations.

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number: A23 A2 R1234 — Assembly Number; Subassembly Number (if used); Schematic Circuit Number

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

2921-56

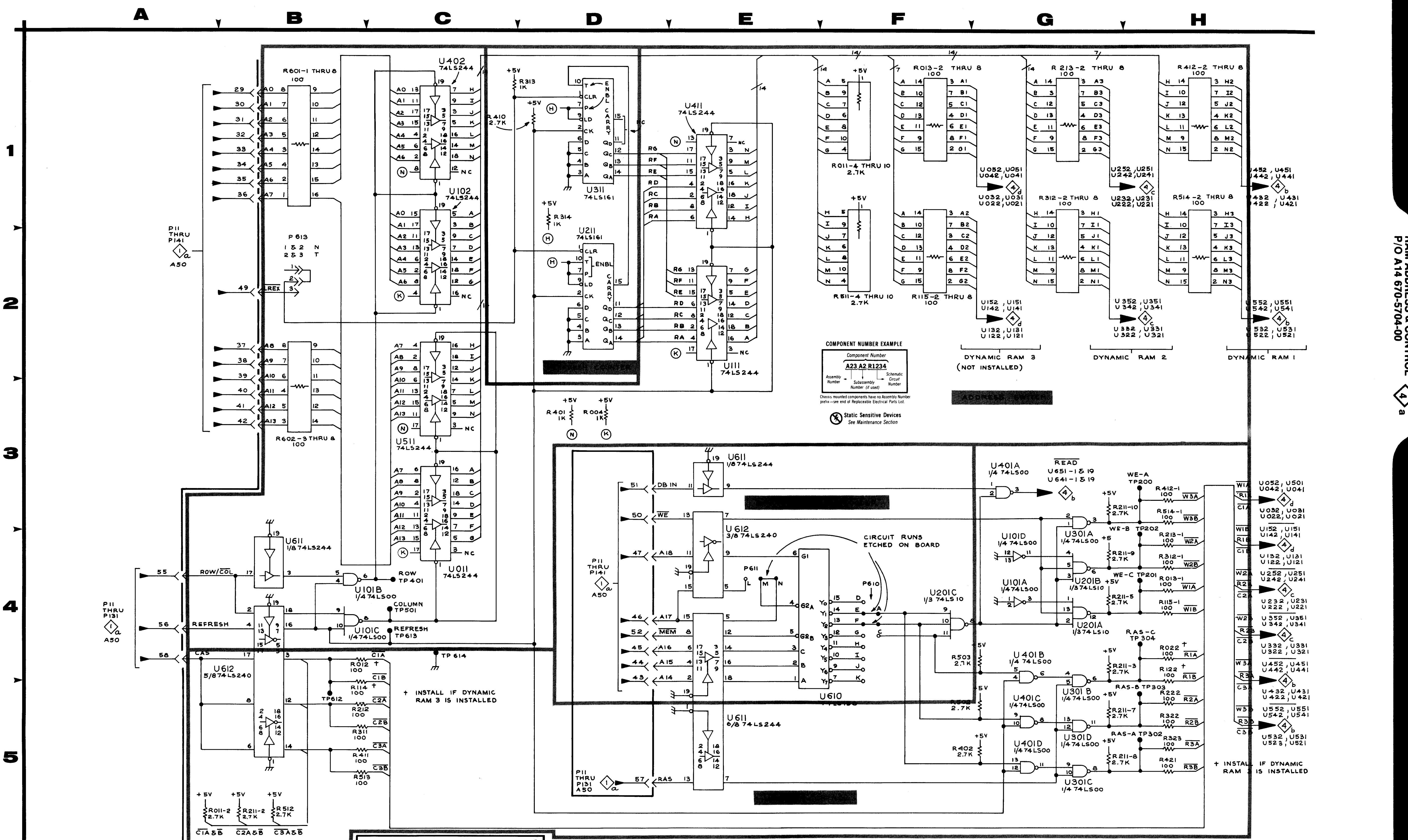
RAM ADDRESS AND CONTROL DIAGRAM ⟨4⟩ a

ASSEMBLY A14 *Partial A14 also shown on diagrams 4a, 4c and 4d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P610	F4	H3
P611	E4	G4
P613	B2	H5
R4	D3	B2
R11-2	A5	B4
R11-4	F1	B4
R11-5	F1	B4
R11-6	F1	B4
R11-7	F1	B4
R11-8	F1	B4
R11-9	F1	B4
R11-10	F1	B4
R12	B4	A4
R13-1	H4	B4
R13-2	F1	B4
R13-3	F1	B4
R13-4	F1	B4
R13-5	F1	B4
R13-6	F1	B4
R13-7	F1	B4
R13-8	F1	B4
R22	H4	B5
R114	B5	B4
R115-1	H4	C4
R115-2	F2	C4
R115-3	F2	C4
R115-4	F2	C4
R115-5	F2	C4
R115-6	F2	C4
R115-7	F2	C4
R115-8	F2	C4
R122	H4	C5
R211-2	B5	C4
R211-5	G4	D4
R211-6	G4	D4
R211-7	G5	D4
R211-8	G5	D4
R211-9	G4	D4
R211-10	G3	D4
R212	B5	C4
R212-1	B5	C4
R213-1	H4	D4
R213-2	G1	D4
R213-3	G1	D4
R213-4	G1	D4
R213-5	G1	D4
R213-6	G1	D4
R213-7	G1	D4
R213-8	G1	D4
R222	H5	D5

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R311	B5	D4
R312-1	H4	E4
R312-2	G1	E4
R312-3	G1	E4
R312-4	G1	E4
R312-5	G1	E4
R312-6	G1	E4
R312-7	G1	E4
R312-8	G1	E4
R313	D1	E3
R314	D1	E3
R322	H5	E5
R323	H5	E5
R401	D3	E2
R402	F5	F1
R410	D1	E3
R411	B5	E4
R412-1	H3	F4
R412-2	H1	F4
R412-3	H1	F4
R412-4	H1	F4
R412-5	H1	F4
R412-6	H1	F4
R412-7	H1	F4
R412-8	H1	F4
R421	H5	F5
R502	F5	F1
R503	F4	F1
R511-4	F2	G4
R511-5	F2	G4
R511-6	F2	G4
R511-7	F2	G4
R511-8	F2	G4
R511-9	F2	G4
R511-10	F2	G4
R512	B5	F4
R513	B5	F4
R514F	H1	G4
R514G	H1	G4
R514H	H1	G4
R514-1	H3	G4
R514-2	H1	G4
R514-3	H1	G4
R514-4	H1	G4
R514-5	H1	G4
R601-1	B1	H1
R601-2	B1	H1
R601-3	B1	H1
R601-4	B1	H1
R601-5	B1	H1
R601-6	B1	H1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R601-7	B1	H1
R601-8	B1	H1
R602-3	B3	H2
R602-4	B3	H2
R602-5	B3	H2
R602-6	B3	H2
R602-7	B3	H2
R602-8	B3	H2
TP200	H3	D1
TP201	H4	D2
TP202	H3	D2
TP302	H5	D2
TP303	H5	E2
TP304	H4	E2
TP401	C4	F2
TP501	C4	F2
TP612	B5	H5
TP613	C4	H5
TP614	C4	H5
U11	C4	B3
U101A	G4	C2
U101B	B4	C2
U101C	B4	C2
U101D	G4	C2
U102	C1	C2
U111	E2	C3
U201A	G4	D1
U201B	G4	D1
U201C	F4	D1
U211	D2	D3
U301A	G3	E1
U301B	G5	E1
U301C	G5	E1
U301D	G5	E1
U311	D1	E3
U401A	G3	E1
U401B	G4	E1
U401C	G5	E1
U401D	G5	E1
U402	C1	F2
U411	E1	F3
U511	C3	G3
U610	F5	H3
U611	B4	H4
U611	E3	H4
U611	E5	H4
U612	B4	H5
U612	E3	H5



1980

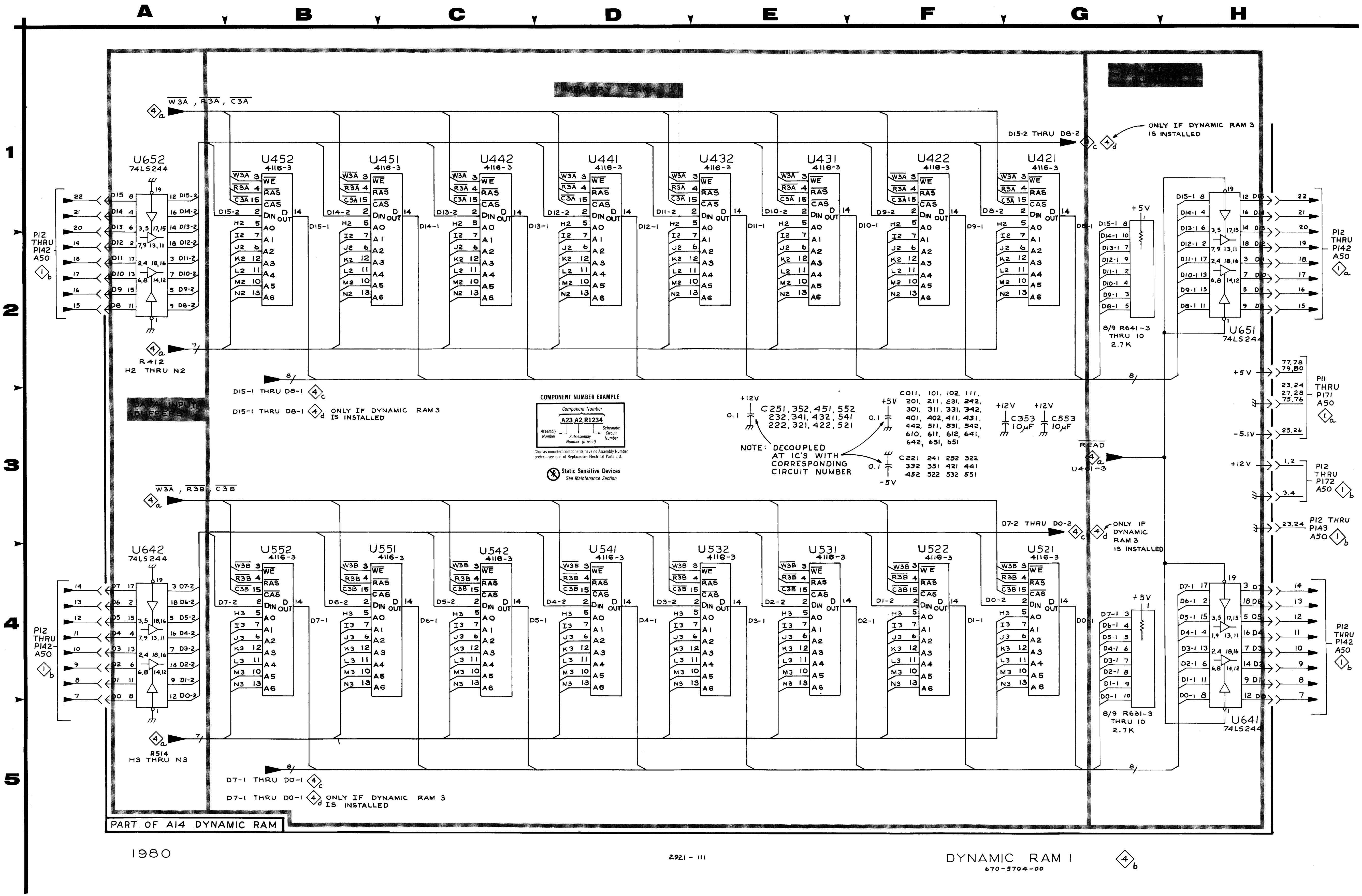
2921-110

RAM ADDRESS & CONTROL
670-5704-00

DYNAMIC RAM (1) DIAGRAM ⟨4⟩ b

ASSEMBLY A14 *Partial A14 also shown on diagrams 4a, 4c and 4d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C11	F3	A3	C432	E3	F6	R641-3	G2	H8
C101	F3	B2	C441	F3	E7	R641-4	G2	H8
C102	F3	B2	C442	F3	F7	R641-5	G2	H8
C111	F3	B4	C451	E3	F8	R641-6	G2	H8
C201	F3	C2	C452	F3	E8	R641-7	G2	H8
C211	F3	C3	C511	F3	F3	R641-8	G2	H8
C221	F3	C5	C521	E3	G5	R641-9	G2	H8
C222	E3	D5	C522	F3	F5	R641-10	G2	H8
C231	F3	D6	C531	F3	G6			
C232	E3	D6	C532	F3	F6	U421	G1	F5
C241	F3	C7	C541	E3	G7	U422	F1	F5
C242	F3	D7	C542	F3	G7	U431	E1	F6
C251	E3	D8	C551	F3	F8	U432	E1	F6
C252	F3	C8	C552	E3	G8	U441	D1	F7
C301	F3	D1	C553	G3	G9	U442	C1	F7
C311	F3	D3	C610	F3	H3	U451	C1	F8
C321	E3	E5	C611	F3	H4	U452	B1	F8
C322	F3	D5	C612	F3	H5	U521	G4	G5
C331	F3	E6	C641	F3	H7	U522	F4	G5
C332	F3	D6	C642	F3	H7	U531	E4	G6
C341	E3	E7	C651	F3	H8	U532	E4	G6
C342	F3	E7	C652	F3	H9	U541	D4	G7
C351	F3	D8				U542	C4	G7
C352	E3	E8	R631-3	G4	H6	U551	C4	G8
C353	G3	E9	R631-4	G4	H6	U552	B4	G8
C401	F3	E1	R631-5	G4	H6	U641	H4	H7
C402	F3	E2	R631-6	G4	H6	U642	A4	H7
C411	F3	E3	R631-7	G4	H6	U651	H2	H8
C421	F3	E5	R631-8	G4	H6	U652	A1	H9
C422	E3	F5	R631-9	G4	H6			
C431	F3	F6	R631-10	G4	H6			



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2921 - III

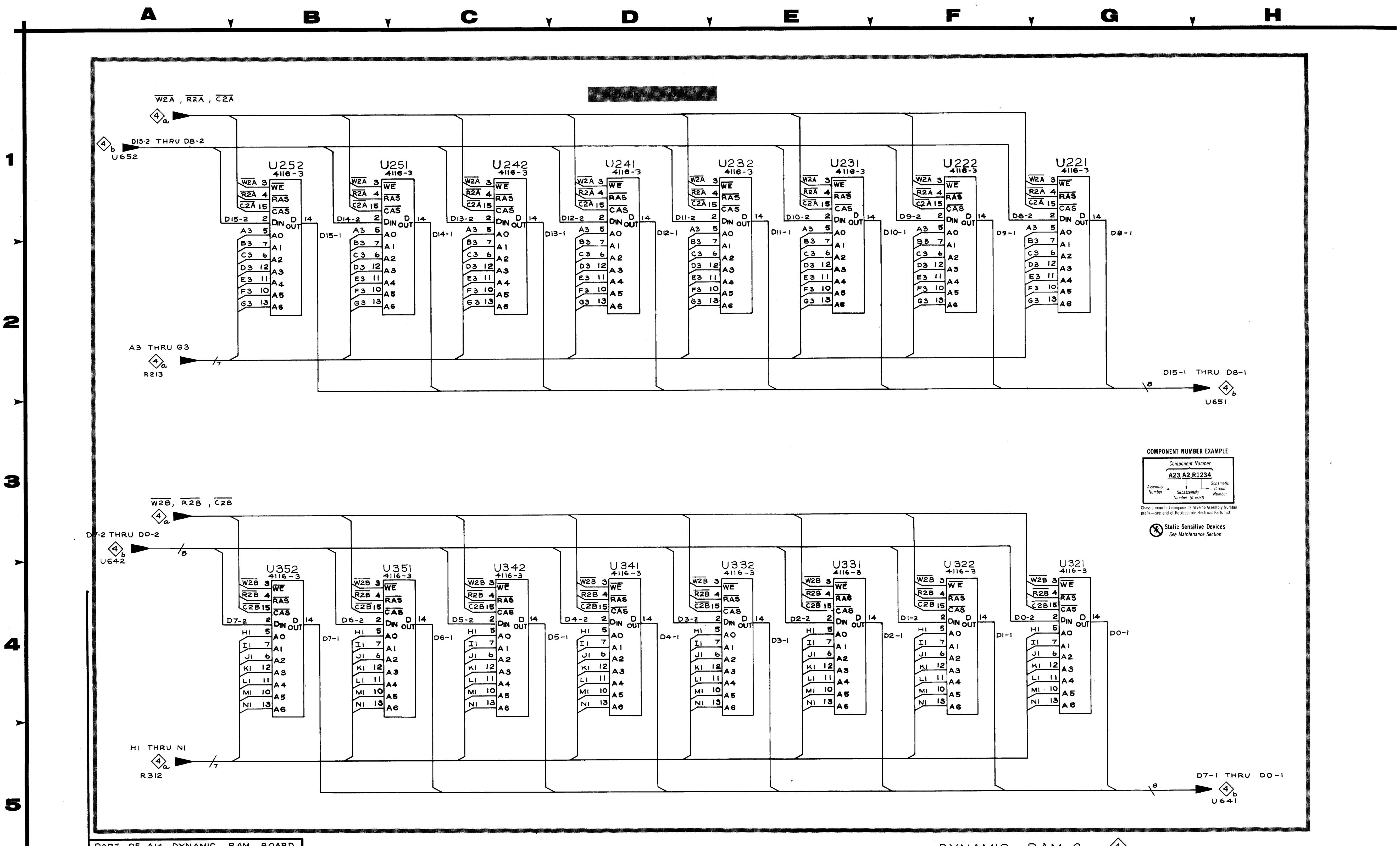
DYNAMIC RAM 1
670-5704-00

DYNAMIC RAM 1
P/O A14 670-5704-00

DYNAMIC RAM (2) DIAGRAM ⟨4⟩ c

ASSEMBLY A14 *Partial A14 also shown on diagrams 4a, 4b and 4d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
U221	G1	D5	U321	G4	E5
U222	F1	D5	U322	F4	E5
U231	E1	D6	U331	E4	E6
U232	E1	D6	U332	E4	E6
U241	D1	D7	U341	D4	E7
U242	C1	D7	U342	C4	E7
U251	C1	D8	U351	C4	E8
U252	B1	D8	U352	B4	E8



DYNAMIC RAM 2 ④c
670-5704-00

2921-112

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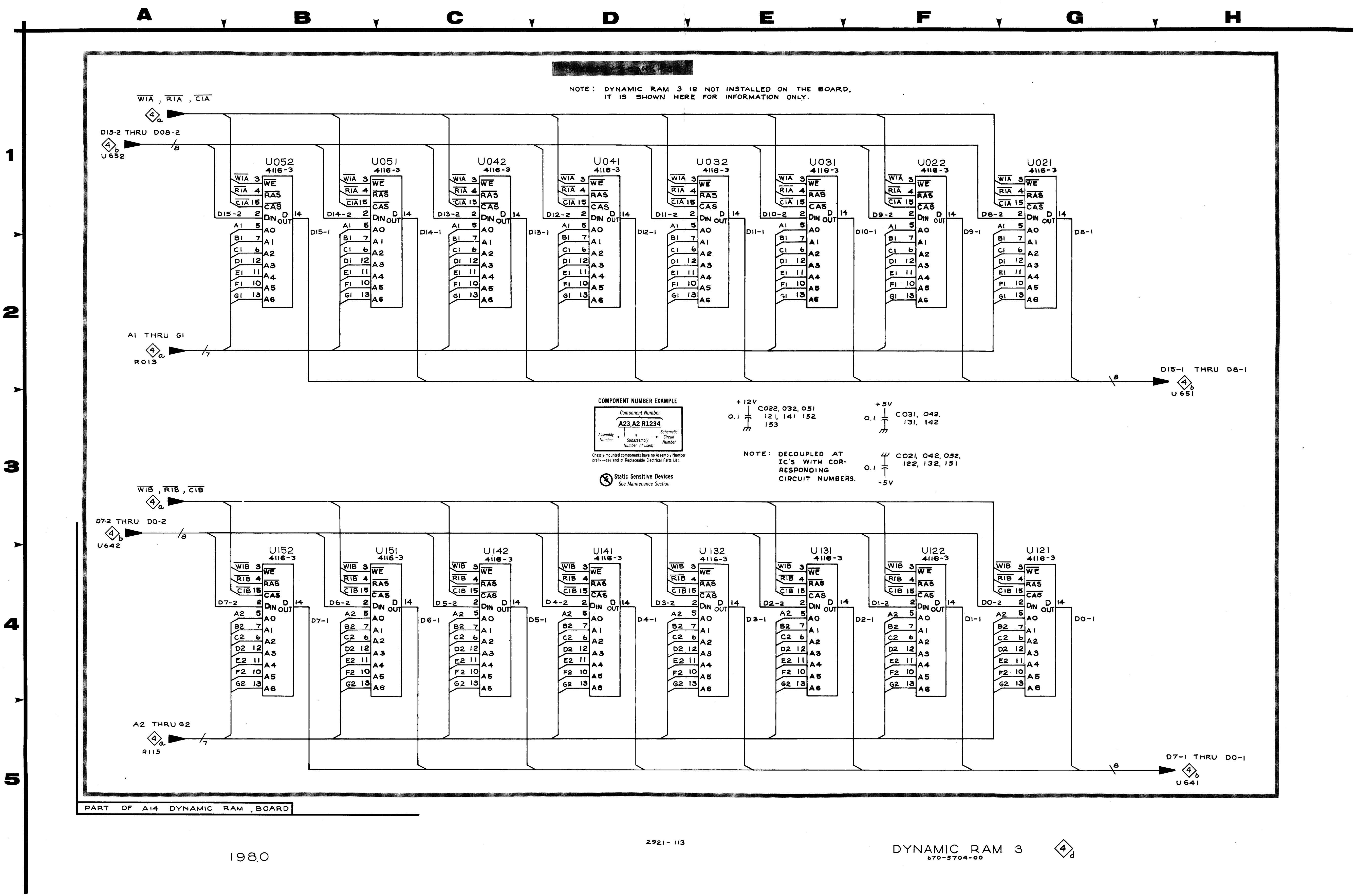
DYNAMIC RAM 2
P/O A14 670-5704-00

④c

DYNAMIC RAM (3) DIAGRAM ⟨4⟩ d

ASSEMBLY A14 *Partial A14 also shown on diagrams 4a, 4b and 4c*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	00	B1	S1		A2
C21	F3	A5	S2		A2
C22	E2	B5			
C31	F3	B6	TP21		A5
C32	E2	B6			
C41	F3	A7	U21	G1	B5
C41	F3	A7	U22	F1	B5
C42	F3	B7	U31	E1	B6
C51	E2	B8	U32	E1	B6
C52	F3	A8	U41	D1	B7
C121	E2	C5	U42	C1	B7
C122	F3	B5	U51	C1	B8
C131	F3	C6	U52	B1	B8
C132	F3	B6	U121	G4	C5
C141	E2	C7	U122	F4	C5
C142	F3	C7	U131	E4	C6
C151	F3	B8	U132	E4	C6
C152	E2	C8	U141	D4	C7
C153	E2	C9	U142	C4	C7
			U151	C4	C8
R1		B2	U152	B4	C8
R2		B2			



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DYNAMIC RAM 3
670-5704-00

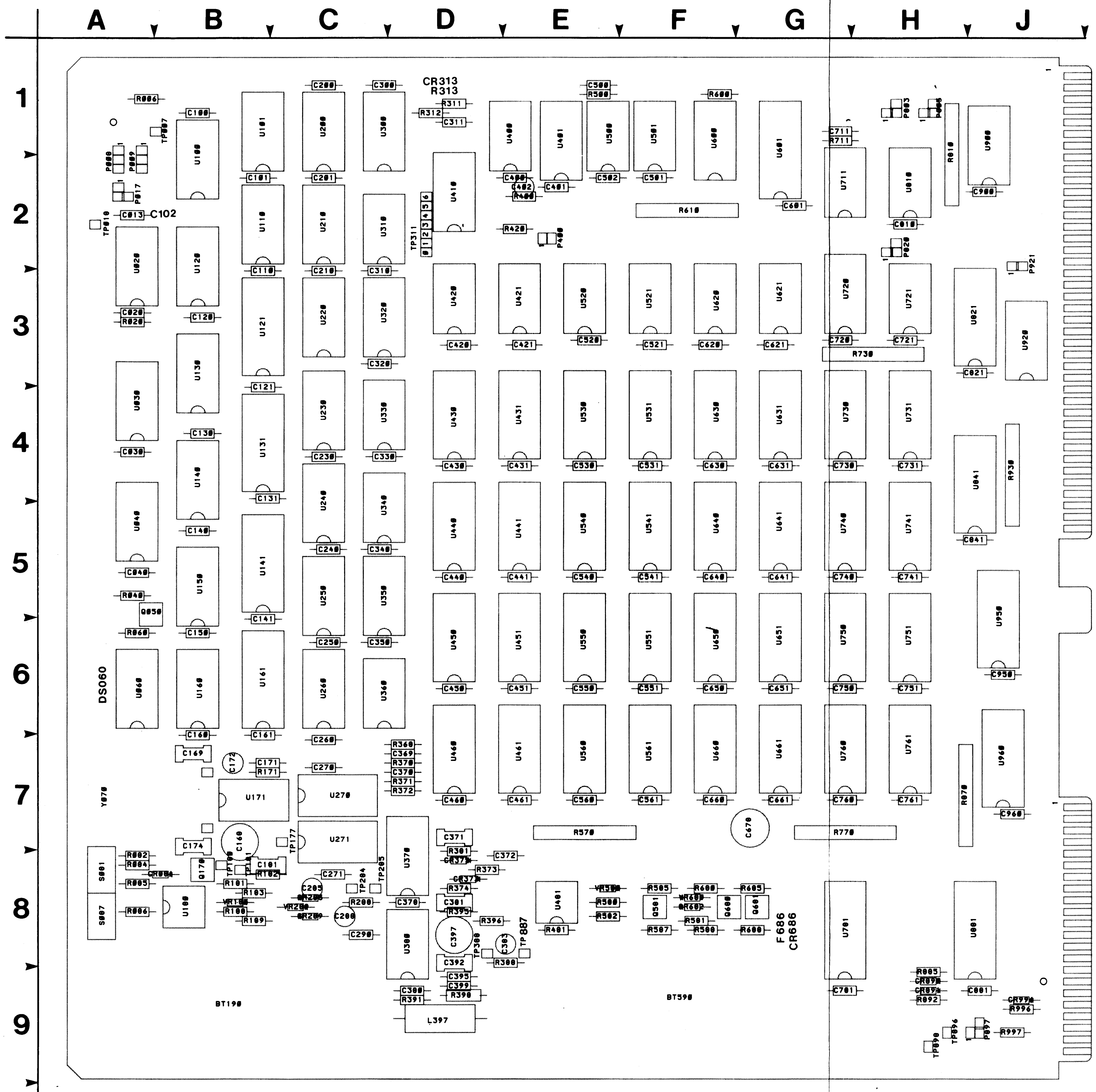
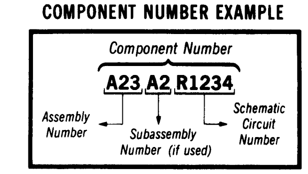


Fig. 10-8. A16–Non-Volatile Memory board component locations.

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



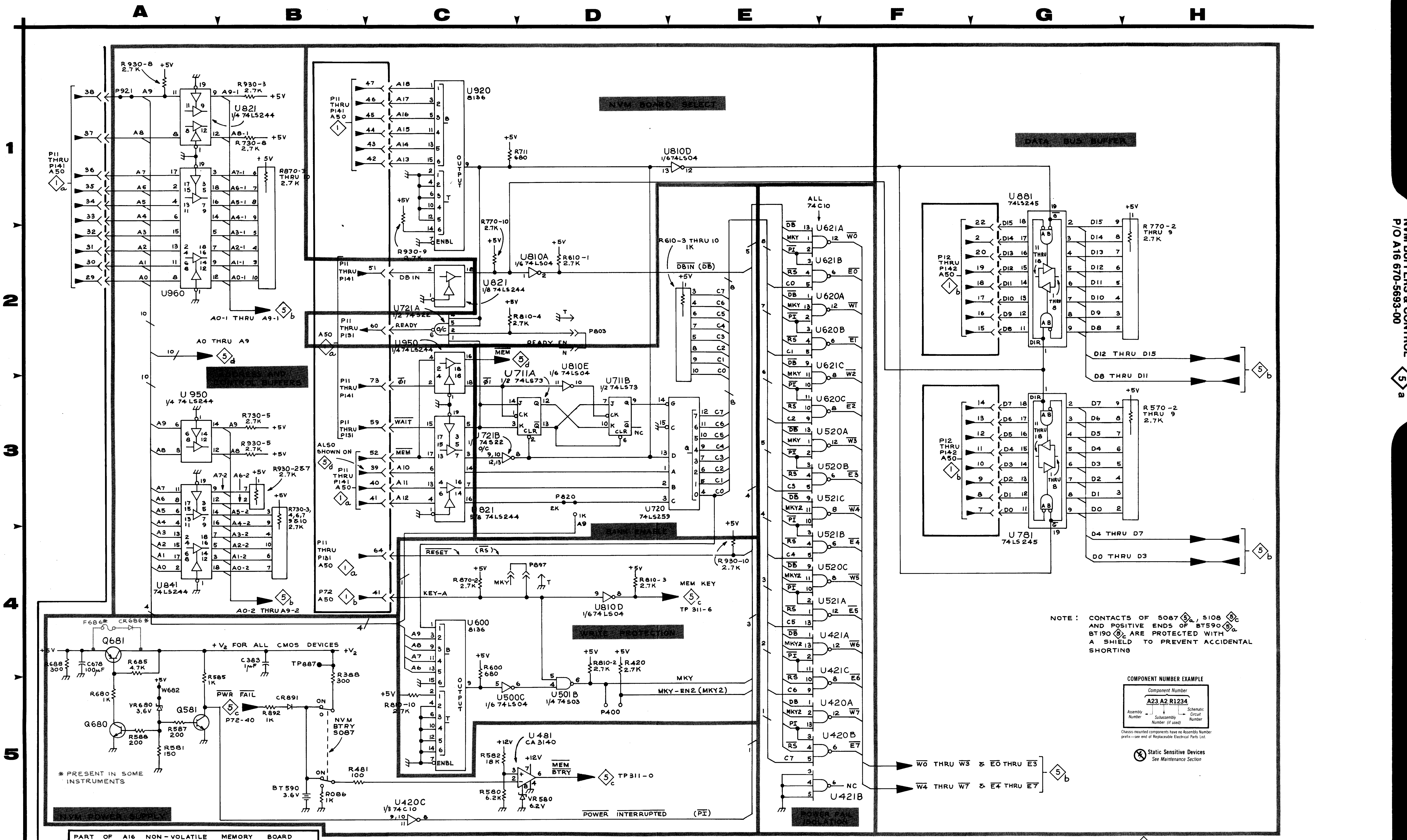
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

2921-57

NVM BUFFERS AND CONTROL DIAGRAM ⟨5⟩ a

ASSEMBLY A16 *Partial A16 also shown on diagrams 5b, 5c and 5d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
BT590	B5	F9
C383	B4	E8
C678	A4	G7
CR891	B5	H9
P400	D5	E2
P803	D2	H1
P820	D3	H2
P897	D4	J9
P921	A1	J2
Q581	A5	F8
Q680	A5	F8
Q681	A4	G8
R86	B5	A8
R388	B4	E8
R420	D4	E2
R481	B5	E8
R570-1	H3	E7
R570-2	H3	E7
R570-3	H3	E7
R570-4	H3	E7
R570-5	H3	E7
R570-6	H3	E7
R570-7	H3	E7
R570-8	H3	E7
R580	C5	E8
R581	A5	F8
R582	C5	E8
R585	A4	F8
R587	A5	F8
R588	A5	F8
R600	C4	F1
R610-10	E2	F2
R610-1	D2	F2
R610-3	E2	F2
R610-4	E2	F2
R610-5	E2	F2
R610-6	E2	F2
R610-7	E2	F2
R610-8	E2	F2
R610-9	E2	F2
R680	A5	F8
R685	A4	G8
R688	A4	G8
R711	C1	G1
R730-0	B3	H3
R730-3	B3	H3
R730-4	B3	H3
R730-5	B3	H3
R730-6	B3	H3
R730-7	B3	H3
R730-8	B1	H3
R730-9	B3	H3
R770-10	C2	G7
R770-2	H2	G7
R770-3	H2	G7
R770-4	H2	G7
R770-5	H2	G7
R770-6	H2	G7
R770-7	H2	G7
R770-8	H2	G7
R770-9	H2	G7
R810-10	C5	H2
R810-2	D4	H2
R810-3	D4	H2
R810-4	C2	H2
R870-10	B1	H2
R870-2	C4	J7
R870-3	B1	H2
R870-4	B1	H2
R870-5	B1	H2
R870-6	B1	H2
R870-7	B1	H2
R870-8	B1	H2
R870-9	B1	H2
R892	B5	H9
R930-10	E4	J4
R930-2	B3	J4
R930-3	B1	J4
R930-5	B3	J4
R930-7	B3	J4
R930-8	A1	J4
R930-9	C1	J4
S87	B5	A8
TP887	B4	D8
U420A	F5	D3
U420B	F5	D3
U421A	F4	E3
U421B	F5	E3
U421C	F4	E3
U481	D5	E8
U500C	C5	E1
U501B	D5	F1
U520A	F3	E3
U520B	F3	E3
U520C	F4	E3
U521A	F4	F3
U521B	F4	F3
U521C	F3	F3
U600	C4	F1
U620A	F2	F3
U620B	F2	F3
U620C	F3	F3
U621A	F2	G3
U621B	F2	G3
U621C	F2	G3
U711A	D3	G2
U711B	D3	G2
U720	E3	G3
U721A	C2	H3
U721B	C3	H3
U781	G3	G8
U810A	D2	H2
U810D	D4	H2
U810D	E1	H2
U810E	D3	H2
U821B	C3	J3
U821	B1	J3
U821	C2	J3
U821	C3	J3
U841	A4	J4
U881	G2	J8
U920	C1	J3
U950	A3	J6
U950	C2	J6
U960	A2	J7
VR580	D5	E8
VR680	A5	F8
W682	A5	F8



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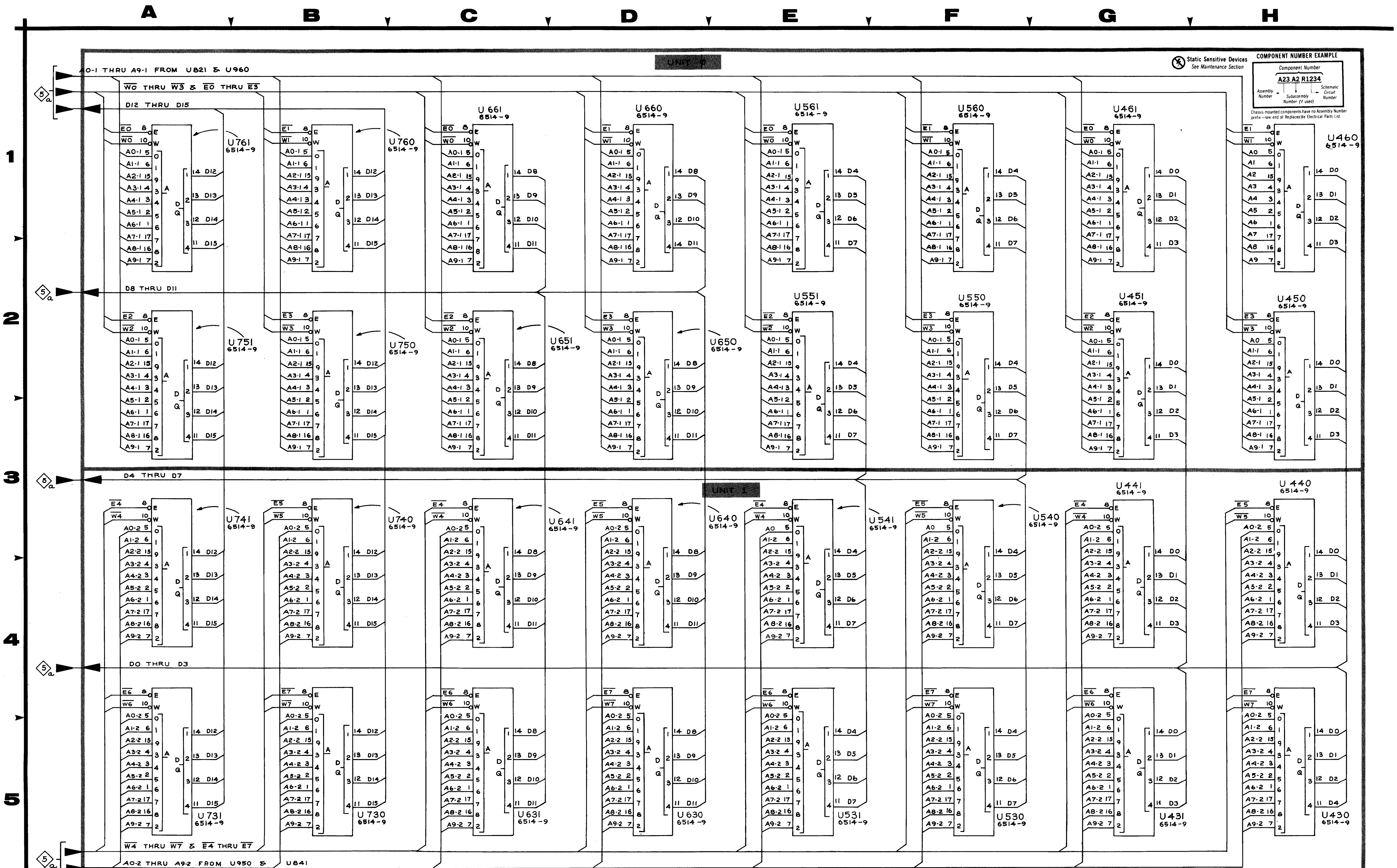
NVM BUFFERS & CONTROL 5a

670-5693-00

NONVOLATILE MEMORY DIAGRAM 5 b

ASSEMBLY A16 *Partial A16 also shown on diagrams 5a, 5c and 5d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
U430	H5	D4	U630	D5	F4
U431	G5	E4	U631	C5	G4
U440	H3	D5	U640	D3	F5
U441	G3	E5	U641	C3	G5
U450	H2	D6	U650	D2	F6
U451	G2	E6	U651	C2	G6
U460	H1	D7	U660	D1	F7
U461	G1	E7	U661	C1	G7
U530	F5	E4	U730	B5	G4
U531	E5	F4	U731	A5	H4
U540	F3	E5	U740	B3	G5
U541	E3	F5	U741	A3	H5
U550	F2	E6	U750	B2	G6
U551	E2	F6	U751	A2	H6
U560	F1	E7	U760	B1	G7
U561	E1	F7	U761	A1	H7



PART OF A16 NON VOLATILE MEMORY

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NON-VOLATILE MEMORY ⟨5⟩b

670-5693-00

NON-VOLATILE MEMORY P/O A16 670-5693-00 ⟨5⟩b

REAL TIME CLOCK DIAGRAM ⟨5⟩ c

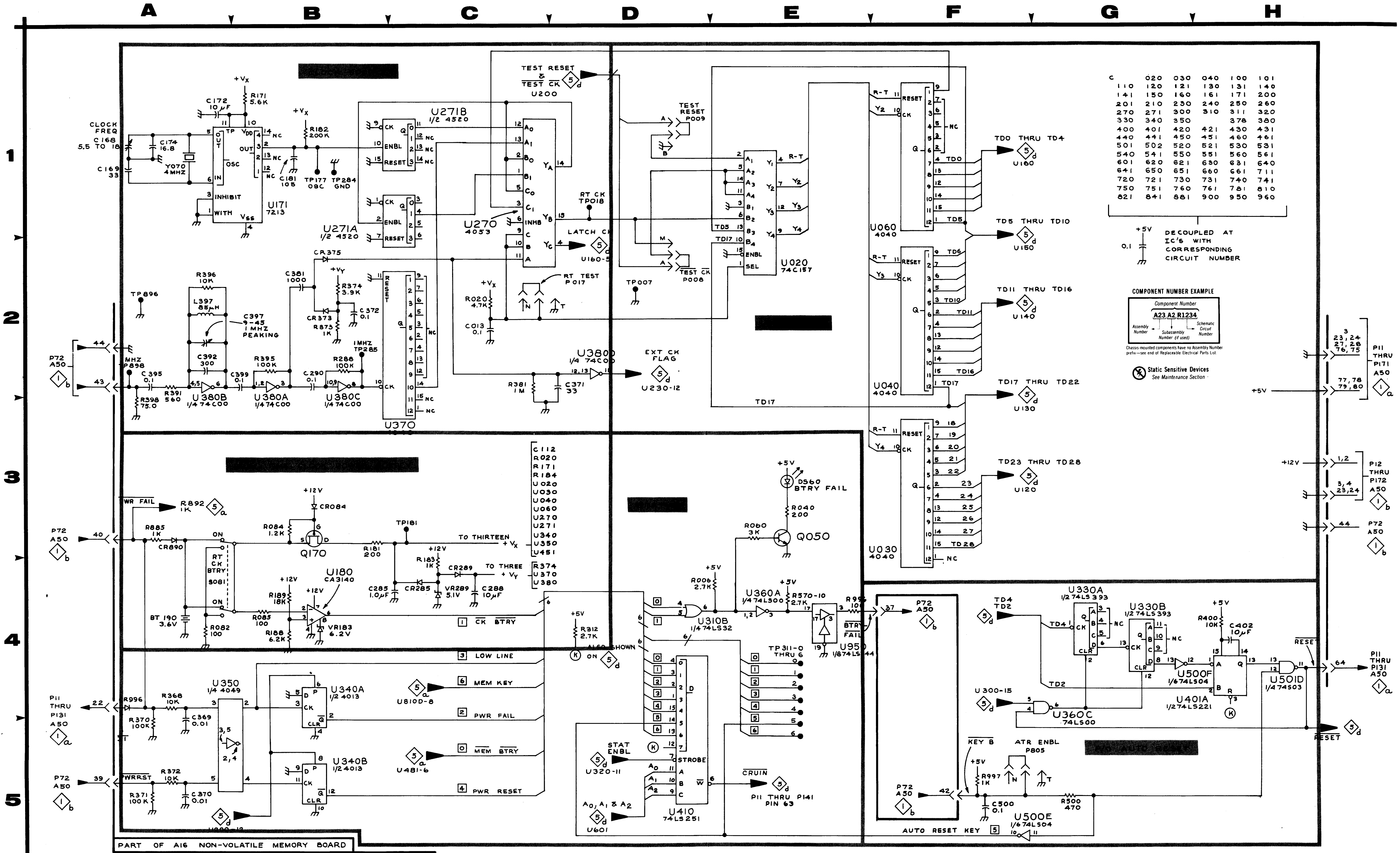
ASSEMBLY A16 *Partial A16 also shown on diagrams 5a, 5b and 5d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
BT00190	A4	B9
C20	F5	A3
C30	F5	A4
C40	H1	A5
C100	H1	B1
C101	H1	B2
C110	F5	B3
C120	F5	B3
C121	F5	B4
C130	H1	B4
C131	H1	B4
C140	H1	B5
C141	F5	B6
C150	F5	B6
C160	F5	B7
C161	H1	B7
C168	A1	B7
C169	A1	B7
C171	H1	B7
C172	A1	B7
C174	A1	B7
C181	B1	B8
C200	H1	C1
C201	F5	C2
C210	F5	C3
C230	F5	C4
C240	H1	C5
C250	H1	C6
C260	H1	C7
C270	F5	C7
C271	F5	C8
C285	C4	C8
C288	C4	C8
C290	B2	C8
C300	F5	C1
C310	H1	C3
C311	H1	D1
C320	H1	C3
C330	F5	C4
C340	F5	C5
C350	F5	C6
C369	A5	D7
C370	A5	D7
C371	D2	D7
C378	H1	D8
C380	H1	D9
C381	B2	D8
C392	A2	D8
C395	A2	D9
C397	A2	D8
C399	B2	D9
C400	F5	E2
C401	F5	E2

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C402	H4	E2
C420	F5	D3
C421	H1	E3
C430	H1	D4
C431	H1	E4
C440	F5	D5
C441	F5	E5
C450	F5	D6
C451	H1	E6
C460	H1	D7
C461	H1	E7
C500	F5	E1
C501	F5	F2
C502	F5	E2
C520	F5	E3
C521	H1	F3
C530	H1	E4
C531	H1	F4
C540	F5	E5
C541	F5	F5
C550	F5	E6
C551	H1	F6
C560	H1	E7
C561	H1	F7
C601	F5	G2
C620	F5	F3
C621	F5	G3
C630	H1	F4
C631	H1	G4
C640	H1	F5
C641	F5	G5
C650	F5	F6
C651	F5	G6
C660	H1	F7
C661	H1	G7
C711	H1	G1
C720	F5	G3
C721	F5	H3
C730	F5	G4
C731	H1	H4
C740	H1	G5
C741	H1	H5
C750	F5	G6
C751	F5	H6
C760	F5	G7
C761	H1	H7
C781	H1	H9
C810	H1	H2
C821	F5	J3
C841	F5	J5
C881	F5	J9
C900	H1	J2
C950	H1	J6
C960	H1	J7

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
CR84	B3	B8
CR285	C4	C8
CR289	C4	C8
CR373	B2	D8
CR375	B2	D8
CR890	A3	H9
CR996	A4	J9
DS60	D3	A6
L397	A2	D9
P8	D2	A2
P9	D1	A2
P17	C2	A2
P805	F5	H1
Q50	D4	A5
Q170	B3	B8
R6	E4	A1
R20	C2	A3
R40	D3	A5
R60	E4	A6
R82	A4	A8
R84	B3	A8
R85	B4	A8
R171	B1	B7
R181	B3	B8
R182	B1	B8
R183	C4	B8
R188	B4	B8
R189	B4	B8
R288	B2	C8
R312	D4	D1
R368	A4	D7
R370	A5	D7
R371	A5	D7
R372	A5	D7
R373	B2	D8
R374	B2	D8
R381	C2	D8
R391	A2	D9
R395	B2	D8
R396	A2	D8
R398	A3	D9
R400	H4	E2
R500	G5	E1
R570-10	E4	E7
R885	A3	H9
R996	E4	J9
R997	F5	J9
S81	A4	A8

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
TP7	D2	B1
TP18	D1	A2
TP177	B1	C7
TP181	C3	B8
TP284	B1	C8
TP285	B2	C8
TP311	E4	D2
TP311-1	E4	D2
TP311-2	E4	D2
TP311-3	E4	D2
TP311-4	E4	D2
TP311-5	A5	D2
TP311-6	A5	D2
TP896	A2	H9
TP898	A2	H9
U20	E2	A2
U30	F3	A4
U40	F2	A5
U60	F1	A6
U171	B1	B7
U180	B4	B8
U270	C1	C7
U271A	C1	C7
U271B	C1	C7
U310B	D4	C2
U330A	G4	C4
U330B	G4	C4
U340A	B4	C5
U340B	B5	C5
U350	A4	C6
U360A	E4	C6
U360C	G4	C6
U370	C2	D8
U380A	B2	D8
U380B	A2	D8
U380C	B2	D8
U380D	D2	D8
U401A	H4	E1
U410	D5	D2
U500E	F5	E1
U500F	G4	E1
U501D	H4	F1
U950	E4	J6
VR183	B4	B8
VR289	C4	C8



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REAL TIME CLOCK 5c

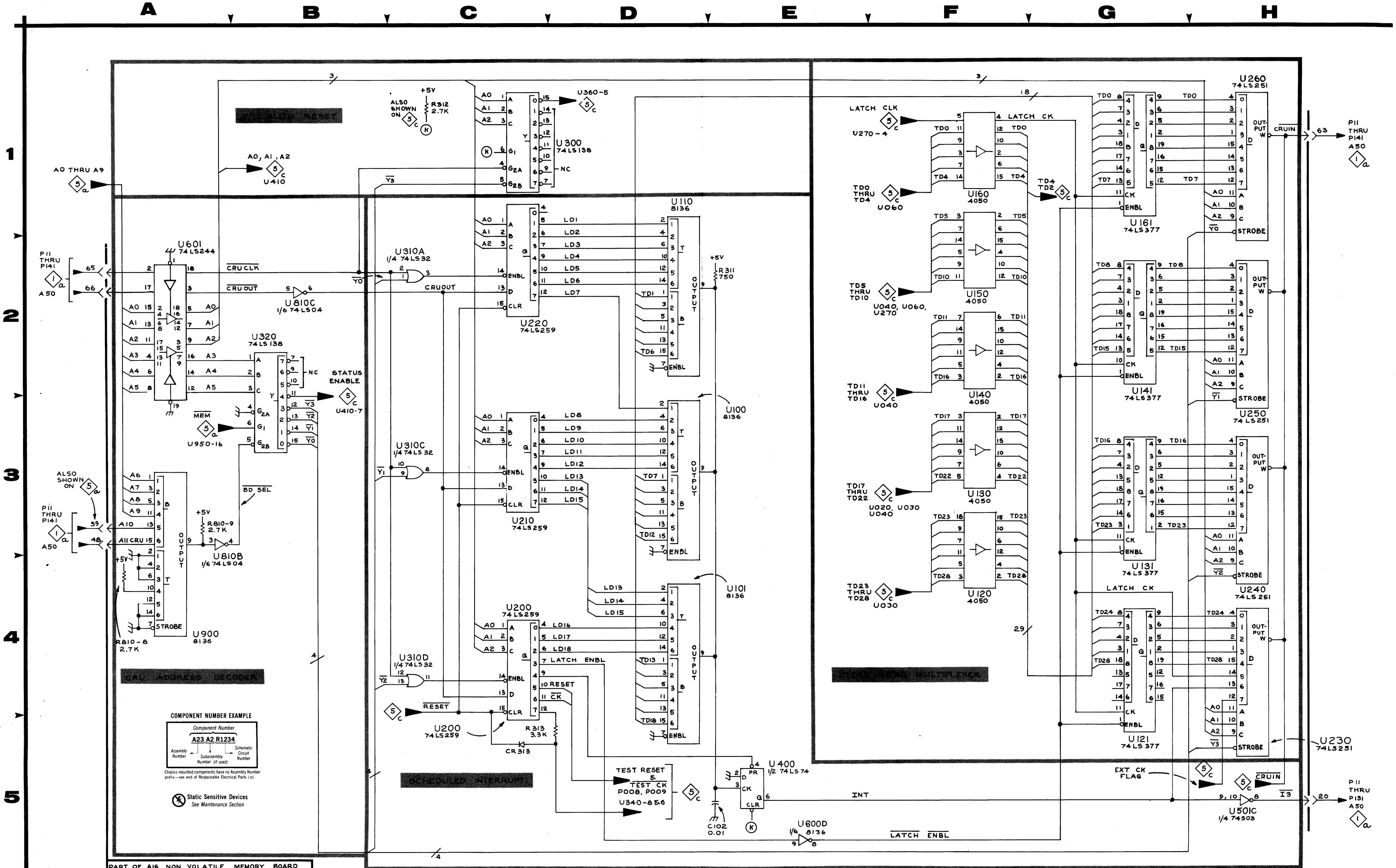
670-5693-00

REAL TIME CLOCK
P/O A16 670-5693-00

REAL TIME CLOCK DATA DIAGRAM ⟨5⟩ d

ASSEMBLY A16 *Partial A16 also shown on diagrams 5a, 5b and 5c*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C102	E5	B2	U150	F2	B5
			U160	F1	B6
CR313	C5	D1	U161	G1	B6
			U200	C4	C1
R311	E2	D1	U210	C3	C2
R312	C1	D1	U220	C2	C3
R313	D5	D1	U230	H5	C4
R810H	A4	H2	U240	H3	C5
R810I	A3	H2	U250	H2	C5
			U260	H1	C6
TP180		B8	U300	C1	C1
TP388		D8	U310A	C2	C2
			U310C	C3	C2
U100	D3	B1	U310D	C4	C2
U101	D4	B1	U320	B2	C3
U110	D2	B2	U400	E5	E1
U120	F4	B2	U501C	H5	F1
U121	G4	B3	U600D	E5	F1
U130	F3	B3	U601	A2	G1
U131	G3	B4	U810B	A3	H2
U140	F2	B4	U810C	B2	H2
U141	G2	B5	U900	A4	J1



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REAL TIME CLOCK DATA
670-5693-00

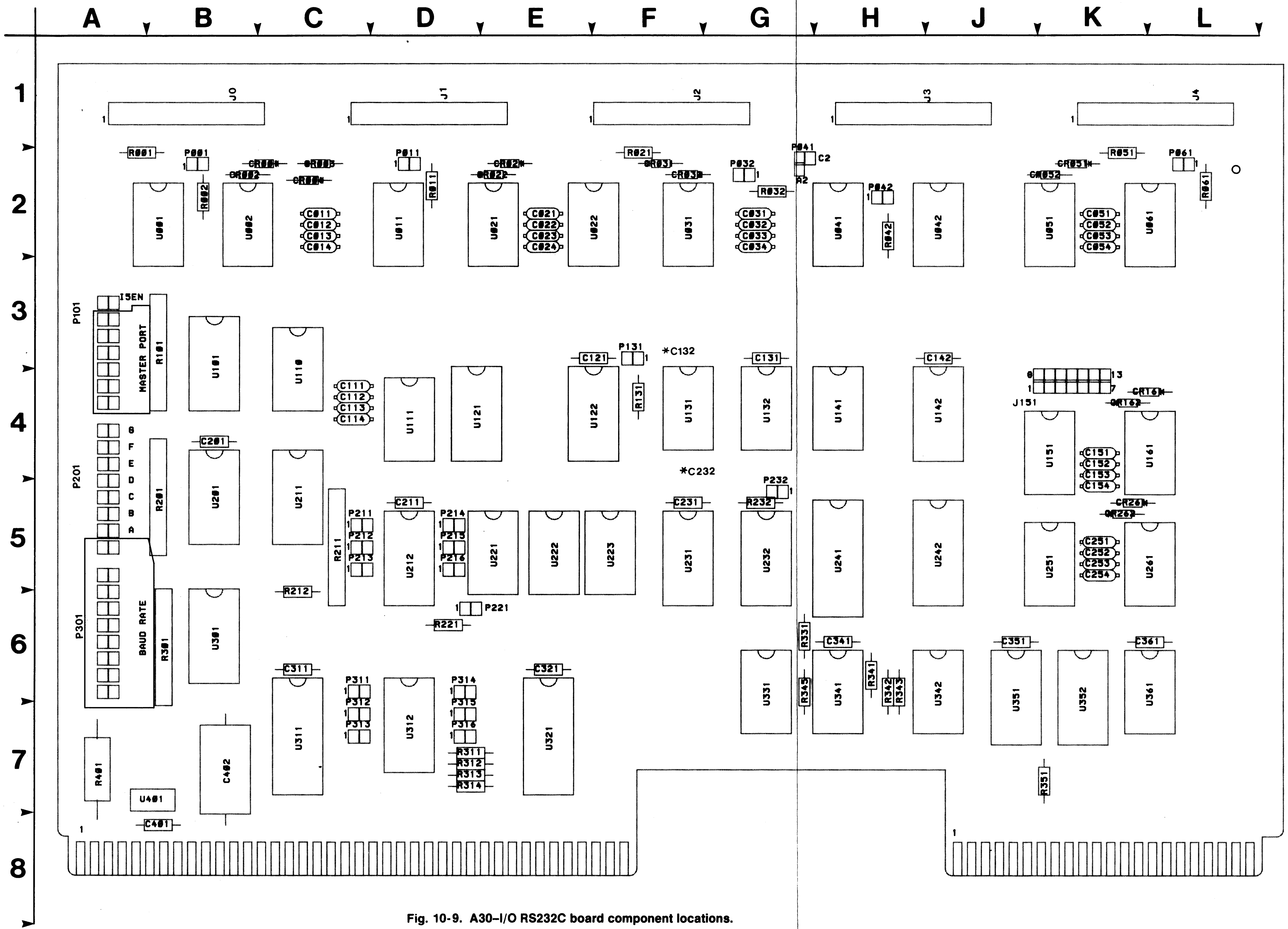


Fig. 10-9. A30–I/O RS232C board component locations.

* mounted on Back of Board

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number

A23 A2 R1234

Assembly Number — *Subassembly Number (if used)* — *Schematic Circuit Number*

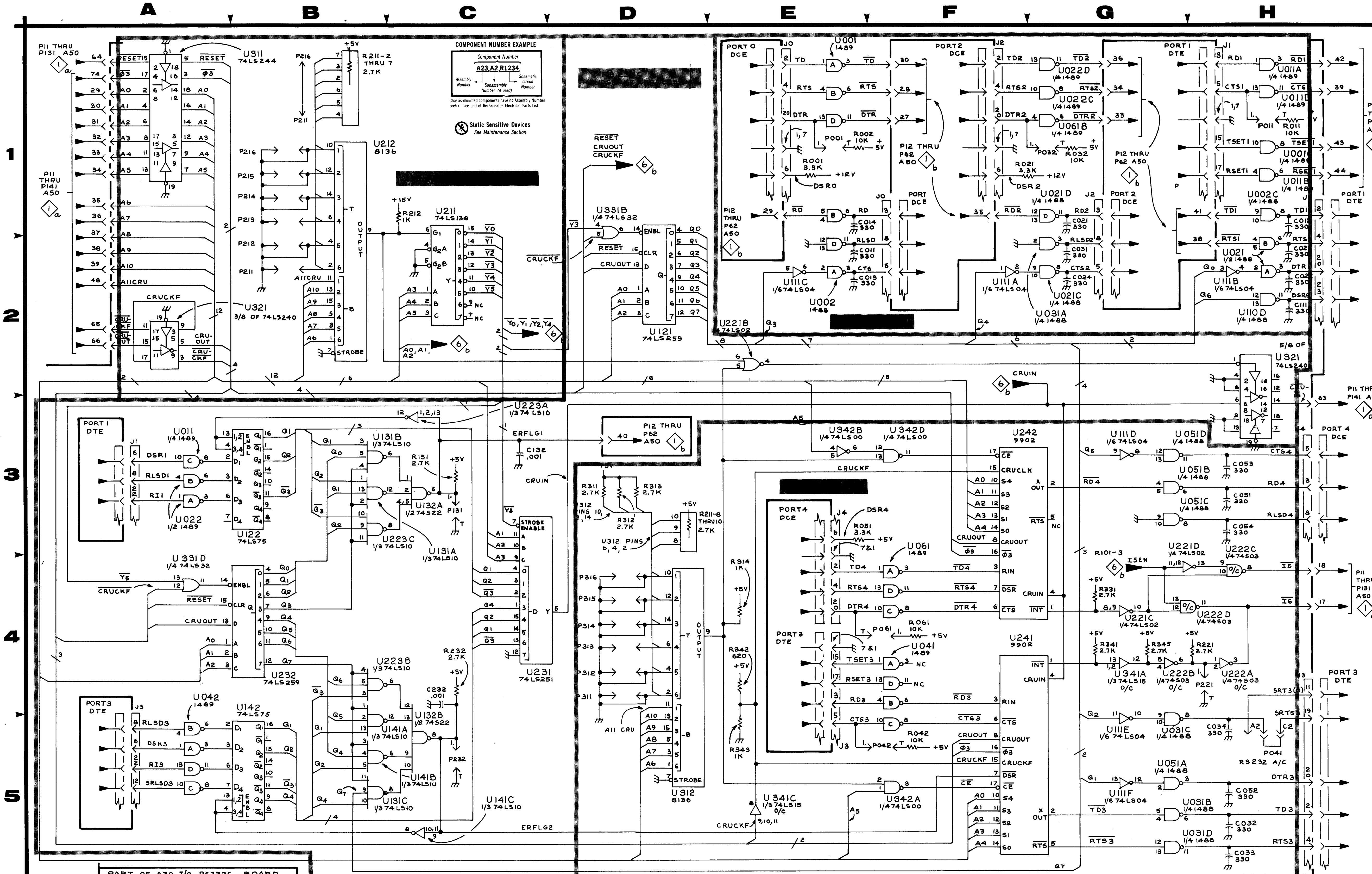
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

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I/O PORTS DIAGRAM ⟨6⟩ a

ASSEMBLY A30 *Partial A30 also shown on diagrams 6b*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C11	E2	C2
C12	H1	C2
C13	E2	C2
C14	E1	C2
C21	G1	E2
C22	H2	E2
C23	H2	E2
C24	G2	E2
C31	G2	G2
C32	H5	G2
C33	H5	G2
C34	H5	G2
C51	H3	K2
C52	H5	K2
C53	H3	K2
C54	H3	K2
C111	H2	C4
C132	C3	F4
C232	C4	G5
JO	E1	B1
JO	F1	B1
J1	A3	D1
J1	H1	D1
J2	F1	F1
J2	G1	F1
J3	A5	J1
J3	E5	J1
J3	H4	J1
J4	E4	L1
J4	H3	L1
P1	E1	B2
P11	H1	D2
P32	G1	G2
P41	H5	G2
P42	F5	H2
P61	F4	L2
P131	C3	F3
P211	B2	C5
P212	B2	C5
P213	B1	C5
P214	B1	D5
P215	B1	D5
P216	B1	D5
P221	H4	E6
P232	C5	G5
P311	D4	C6
P312	D4	C7
P313	D4	C7
P314	D4	D6
P315	D4	D7
P316	D4	D7
R1	E1	A2
R2	E1	B2
R11	H1	D2
R21	G1	F2
R32	G1	G2
R42	F5	H2
R51	E3	K2
R61	F4	L2
R131	C3	F4
R211-2	B1	C5
R211-3	B1	C5
R211-4	B1	C5
R211-5	B1	C5
R211-6	B1	C5
R211-7	B1	C5
R211-8	D3	C5
R211-9	D3	C5
R211-10	D3	C5
R212	C1	C6
R221	H4	D6
R232	C4	G5
R311	D3	D7
R312	D3	D7
R313	D3	D7
R314	E4	D7
R331	G4	G6
R341	G4	H6
R342	E4	H6
R343	E5	H6
R345	G4	G6
U1A	E1	B1
U1B	E1	B1
U1C	H1	B1
U1D	E1	B1
U2A	E2	B1
U2B	E1	B1
U2C	H1	B1
U2D	E2	B1
U11A	H1	D2
U11B	H1	D2
U11C	A3	D2
U11D	H1	D2
U21A	H2	E2
U21B	H2	E2
U21C	G2	E2
U21D	G1	E2
U22A	A3	F2
U22B	A3	F2
U22C	G1	F2
U22D	G1	F2
U31A	G2	F2
U31B	G5	F2
U31C	G5	F2
U31D	G5	F2
U41A	F4	H2
U41B	F4	H2
U41C	F5	H2
U41D	F4	H2
U42A	A5	J2
U42B	A5	J2
U42C	A5	J2
U42D	A5	J2
U51A	G5	K2
U51B	G3	K2
U51C	G3	K2
U51D	G3	K2
U61A	F4	L2
U61B	G1	L2
U61C	F4	L2
U61D	F4	L2
U111A	F2	D4
U111B	H2	D4
U111C	E2	D4
U111D	G3	D4
U111E	G5	D4
U111F	G5	D4
U121	D2	D4
U122	B3	F4
U131A	B3	F4
U131B	B3	F4
U131C	B5	F4
U132A	C3	G4
U132B	C5	G4
U141A	B5	H4
U141B	B5	H4
U141C	C5	H4
U142	B5	J4
U211	C2	C5
U212	B1	D5
U221B	E2	E5
U221C	G4	E5
U221D	G3	E5
U222A	H4	E5
U222B	G4	E5
U222C	H4	E5
U222D	H4	E5
U223A	C3	F5
U223B	B4	F5
U223C	B3	F5
U231	C4	F5
U232	B4	G5
U241	F4	H5
U242	F3	J5
U311	A1	C7
U312	D5	D7
U321	A2	E7
U321	H2	E7
U331B	D1	G6
U331D	A4	G6
U341A	G4	H6
U341C	E5	H6
U342A	F5	J6
U342B	E3	J6
U342D	F3	J6



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I/O PORTS AND PROCESSING 6a

670-5698-00

I/O PORTS & PROCESSING
P/O A30 670-5698-00

MASTER PORT SELECT DIAGRAM ⟨6⟩ b

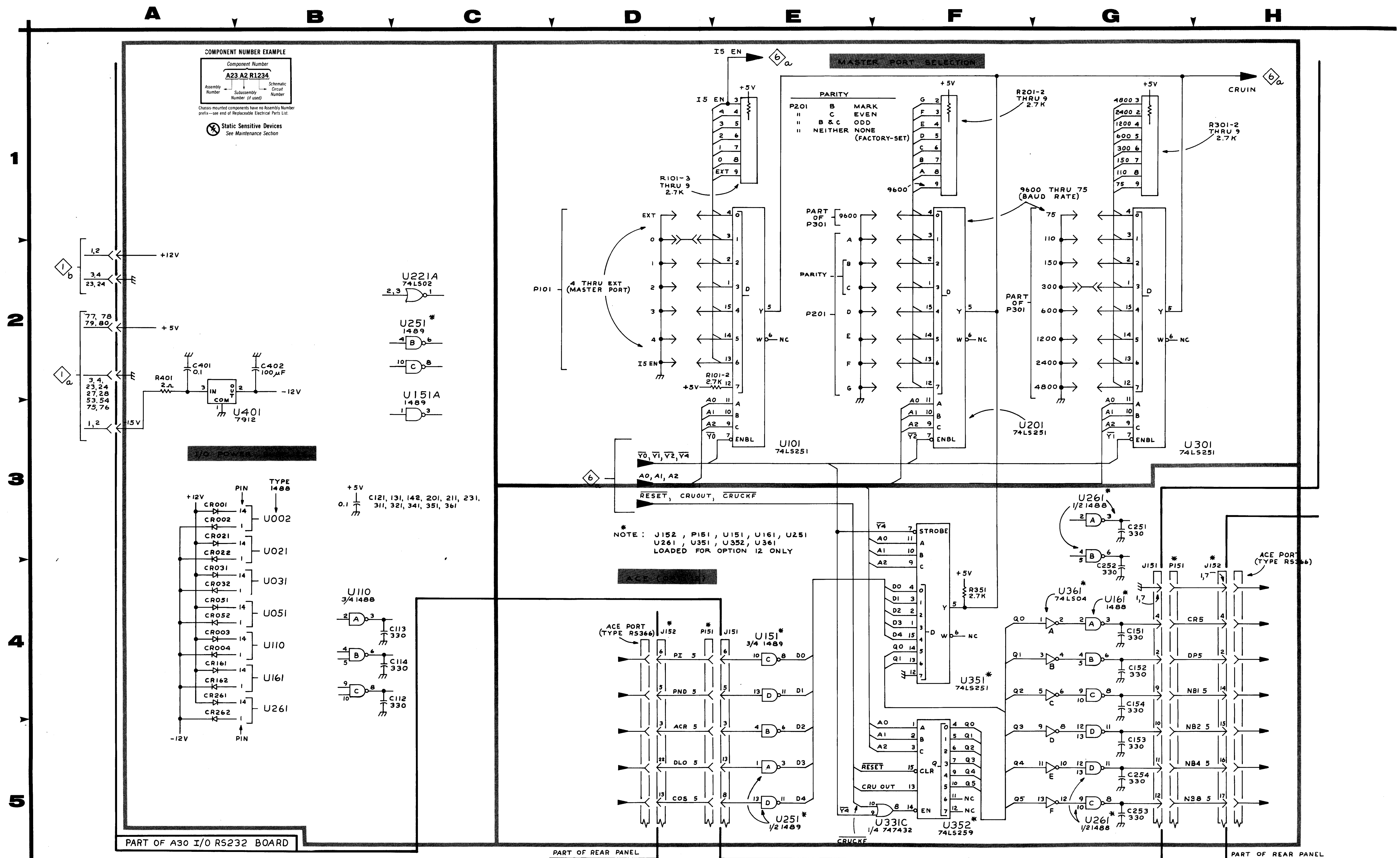
ASSEMBLY A30

Partial A30 also shown on diagrams 6a

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C112	B4	C4
C113	B4	C4
C114	B4	C4
C121	B3	F3
C131	C3	G3
C142	C3	J3
C151	G4	K4
C152	G4	K4
C153	G5	K4
C154	G4	K5
C201	C3	B4
C211	C3	D5
C231	C3	F5
C251	G3	K5
C252	G4	K5
C253	G5	K5
C254	G5	K5
C311	B3	C6
C321	C3	E6
C341	C3	H6
C351	C3	J6
C361	C3	L6
C401	A2	B8
C402	B2	B7
CR1	A3	C2
CR2	A3	B2
CR3	A4	C2
CR4	A4	C2
CR21	A3	E2
CR22	A3	E2
CR31	A4	F2
CR32	A4	F2
CR51	A4	K2
CR52	A4	K2
CR161	A4	L4
CR162	A4	K4
CR261	A4	K5
CR262	A4	K5
P101	D2	A3
P151	G4	J4
P201	E2	A4
P301	F1	A5
P301	G2	A5
R101-2	E2	B3
R101-3	E1	B3
R101-4	E1	B3
R101-5	E1	B3
R101-6	E1	B3
R101-7	E1	B3
R101-8	E1	B3
R101-9	E1	B3
R201-2	F1	B5
R201-3	F1	B5
R201-4	F1	B5
R201-5	F1	B5
R201-6	F1	B5
R201-7	F1	B5
R201-8	F1	B5
R201-9	F1	B5
R301-2	G1	B6
R301-3	G1	B6
R301-4	G1	B6
R301-5	G1	B6
R301-6	G1	B6
R301-7	G1	B6
R301-8	G1	B6
R301-9	G1	B6
R351	F4	K7
R401	A2	A7
U2	B3	B2
U21	B3	E2
U31	B4	F2
U51	B4	K2
U101	E3	B3
U110A	B4	C4
U110B	B4	C4
U110C	B4	C4
U151A	C2	K4
U151B	E5	K4
U151C	E4	K4
U151D	E4	K4
U161A	G4	L4
U161B	G4	L4
U161C	G4	L4
U161D	G5	L4
U161	B4	L4
U201	F3	B5
U221A	C2	E5
U251A	E5	K5
U251B	C2	K5
U251C	C3	K5
U251D	E5	K5
U261A	G3	L5
U261B	G3	L5
U261C	G5	L5
U261D	G5	L5
U261	B4	L5
U301	G3	B6
U331C	F5	G6
U351	F4	J6
U352	F5	K7
U361A	G4	L6
U361B	G4	L6
U361C	G4	L6
U361D	G5	L6
U361E	G5	L6
U361F	G5	L6
U401	A2	B7

CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
J152	D4	CHASSIS
J152	H4	CHASSIS



MASTER PORT SELECTION AND ACE ⟨6b⟩

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670-5698-00

PORT SELECTION AND ACE ⟨6b⟩
P/O A30 670-5698-00

A24A1 V D C BOARD & PARTS LOCATION TABLE

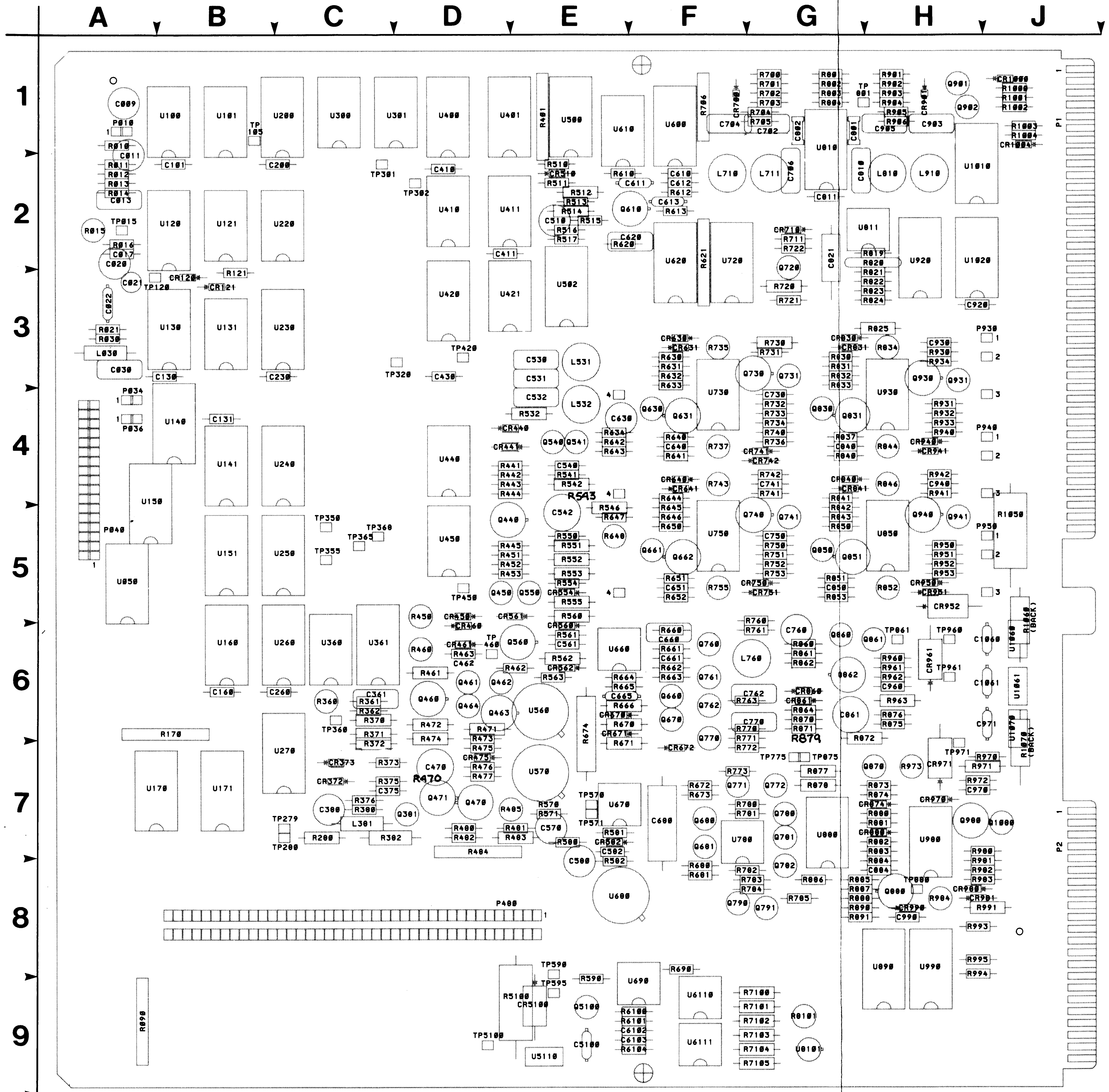


Fig. 10-10. A24A1–Video Data Converter component locations.

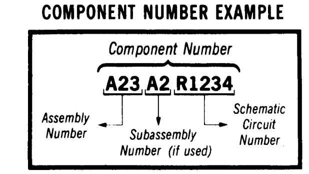
INPUT AMPLIFIERS DIAGRAM ⟨7⟩ a

ASSEMBLY A24 *Partial A24 also shown on diagrams 7b, 7d and 7e*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
C640	H2	F4	CR840	F4	G4	Q791	B2	G8	R729
C651	H4	F5	CR841	F4	G4	Q830	F1	G4	R730
C660	D2	F6	CR860	D1	G6	Q831	F2	G4	R731
C661	D2	F6	CR861	D1	G6	Q850	F3	G5	R732
C665	E2	E6	CR874	A1	H7	Q851	F4	G5	R733
C672	C2	F6*	CR880	A2	H7	Q860	E1	G6	R734
C680	B3	F7	CR940	F3	H4	Q861	E1	H6	R735
C729	G1	F2*	CR941	F3	H4	Q862A	D1	G6	R736
C730	H1	G4	CR950	F5	H5	Q862B	D1	G6	R737
C741	H3	G4	CR951	F5	H5	Q870	A1	H7	R740
C750	G1	G5	CR970	B1	H7	Q880	B2	H8	R741
C760	E1	G6	CR980	A3	H8	Q930	F1	H3	R742
C762	E2	G6	CR981	A3	J8	Q931	F2	H3	R743
C770	D2	G6	CR990	B2	H8	Q940	F3	H5	R750
C840	F2	G4				Q941	F5	H5	R751
C850	F4	G5	L760	E2	G6	Q980	B1	H7	R752
C861	E1	G6	L971	A1	H7*	Q1080	A3	J7	R753
C865	D1	G6*	L991	A2	H8*				R755
C871	D1	H6*				R451	E2	E5	R760
C875	B2	G7*	P930	G2	J3	R452	E3	E5	R761
C880	A2	G7*	P940	G3	J4	R453	E3	E5	R763
C881	B2	G7*	P950	G4	J5	R630	G1	F3	R770
C882	C1	G7*				R631	H1	F3	R771
C884	C2	H8	Q450	E3	D5	R632	H1	F3	R772
C886	C3	H8*	Q630	H1	F4	R633	H1	F3	R773
C930	F1	H3	Q631	H2	F4	R640	H2	F4	R780
C940	F3	H4	Q660	D2	F6	R641	H2	F4	R781
C960	E1	H6	Q661	H3	F5	R644	G4	F4	R782
C961	E1	H6*	Q662	H4	F5	R645	H4	F5	R783
C970	B1	H7	Q670	D2	F6	R646	H4	F5	R784
C980	A1	H7*	Q680	C3	F7	R650	H4	F5	R785
C990	B2	H8	Q681	B3	F7	R651	H4	F5	R825
			Q730	H1	G3	R652	H4	F5	R830
CR630	H1	F3	Q731	H2	G3	R660	D2	F6	R831
CR631	H1	F3	Q740	H3	G5	R661	D2	F6	R832
CR640	H4	F4	Q741	H5	G5	R662	D2	F6	R833
CR641	H4	F4	Q760	D2	F6	R663	D2	F6	R834
CR670	E3	E6	Q761	D2	F6	R664	D2	E6	R837
CR671	E3	E6	Q762	C3	F6	R665	E2	E6	R840
CR672	E3	F7	Q770	D2	F6	R666	E2	E6	R841
CR741	H3	G4	Q771	C2	F7	R670	E2	E6	R842
CR742	H3	G4	Q772	C2	G7	R671	E3	E6	R843
CR750	H5	G5	Q780	C3	G7	R672	C2	F7	R844
CR751	H5	G5	Q781	C3	G7	R673	B3	F7	R846
CR830	F1	G3	Q782	C3	G8	R680	C3	F8	R850
CR831	F1	G3	Q790	B2	F8	R681	B3	F8	R851

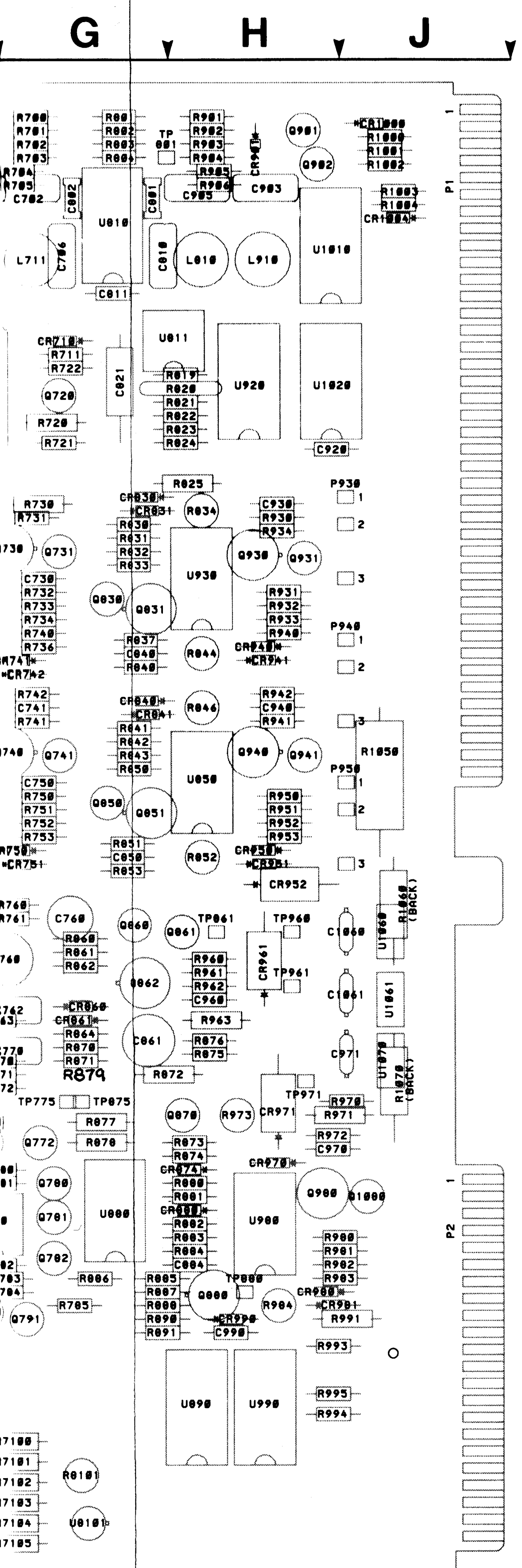
Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

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ons.

INPUT AMPLIFIERS DIAGRAM 7 a

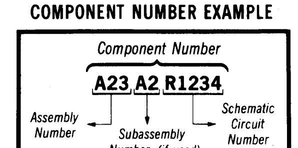
ASSEMBLY A24 *Partial A24 also shown on diagrams 7b, 7d and 7e*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C640	H2	F4
C651	H4	F5
C660	D2	F6
C661	D2	F6
C665	E2	E6
C672	C2	F6*
C680	B3	F7
C729	G1	F2*
C730	H1	G4
C741	H3	G4
C750	G1	G5
C760	E1	G6
C762	E2	G6
C770	D2	G6
C840	F2	G4
C850	F4	G5
C861	E1	G6
C865	D1	G6*
C871	D1	H6*
C875	B2	G7*
C880	A2	G7*
C881	B2	G7*
C882	C1	G7*
C884	C2	H8
C886	C3	H8*
C930	F1	H3
C940	F3	H4
C960	E1	H6
C961	E1	H6*
C970	B1	H7
C980	A1	H7*
C990	B2	H8
CR630	H1	F3
CR631	H1	F3
CR640	H4	F4
CR641	H4	F4
CR670	E3	E6
CR671	E3	E6
CR672	E3	F7
CR741	H3	G4
CR742	H3	G4
CR750	H5	G5
CR751	H5	G5
CR830	F1	G3
CR831	F1	G3
CR840	F4	G4
CR841	F4	G4
CR860	D1	G6
CR861	D1	G6
CR874	A1	H7
CR880	A2	H7
CR940	F3	H4
CR941	F3	H4
CR950	F5	H5
CR951	F5	H5
CR970	B1	H7
CR980	A3	H8
CR981	A3	J8
CR990	B2	H8
L760	E2	G6
L971	A1	H7*
L991	A2	H8*
P930	G2	J3
P940	G3	J4
P950	G4	J5
Q450	E3	D5
Q630	H1	F4
Q631	H2	F4
Q660	D2	F6
Q661	H3	F5
Q662	H4	F5
Q670	D2	F6
Q680	C3	F7
Q681	B3	F7
Q730	H1	G3
Q731	H2	G3
Q740	H3	G5
Q741	H5	G5
Q760	D2	F6
Q761	D2	F6
Q762	C3	F6
Q770	D2	F6
Q771	C2	F7
Q772	C2	G7
Q780	C3	G7
Q781	C3	G7
Q782	C3	G8
Q790	B2	F8
Q791	B2	G8
Q830	F1	G4
Q831	F2	G4
Q850	F3	G5
Q851	F4	G5
Q860	E1	G6
Q861	E1	H6
Q862A	D1	G6
Q862B	D1	G6
Q870	A1	H7
Q880	B2	H8
Q930	F1	H3
Q931	F2	H3
Q940	F3	H5
Q941	F5	H5
Q980	B1	H7
Q1080	A3	J7
R451	E2	E5
R452	E3	E5
R453	E3	E5
R630	G1	F3
R631	H1	F3
R632	H1	F3
R633	H1	F3
R640	H2	F4
R641	H2	F4
R644	G4	F4
R645	H4	F5
R646	H4	F5
R650	H4	F5
R651	H4	F5
R652	H4	F5
R660	D2	F6
R661	D2	F6
R662	D2	F6
R663	D2	F6
R664	D2	E6
R665	E2	E6
R666	E2	E6
R670	E2	E6
R671	E3	E6
R672	C2	F7
R673	B3	F7
R680	C3	F8
R681	B3	F8
R729	G1	F2 *
R730	G1	G3
R731	H1	G3
R732	H1	G4
R733	H3	G4
R734	H3	G4
R735	H1	F3
R736	G2	G4
R737	H3	F4
R740	H2	G4
R741	H3	G4
R742	H3	G4
R743	H4	F4
R750	H5	G5
R751	H5	G5
R752	H5	G5
R753	G5	G5
R755	H5	F5
R760	E2	G5
R761	D2	G6
R763	C2	G6
R770	D2	G6
R771	D1	G6
R772	D2	G7
R773	C2	F7
R780	C3	G7
R781	C3	G7
R782	B3	G8
R783	B3	G8
R784	B2	G8
R785	B2	G8
R825	G1	H3
R830	F1	G3
R831	F1	G3
R832	F1	G3
R833	F1	G3
R834	F1	H3
R837	F2	G4
R840	F2	G4
R841	F4	G4
R842	F4	G5
R843	F4	G5
R844	F3	H4
R846	F4	H4
R850	F4	G5
R851	F4	G5
R852	F5	H5
R853	F4	G5
R854	E1	H5*
R860	E1	G6
R861	E1	G6
R862	E1	G6
R864	D1	G6
R870	D1	G6
R871	D2	G6
R872	E1	H6
R873	A1	H7
R874	A1	H7
R875	D1	H6
R876	D1	H6
R877	C1	G7
R878	C1	G7
R879	E1	G6
R880	A1	H7
R881	B2	H7
R882	B3	H7
R883	B1	H7
R884	B2	H8
R885	C2	G8
R886	C3	G8
R887	C2	G8
R888	C1	G8
R889	C1	G7*
R890	C2	G2
R891	B2	G8
R930	F1	H3
R931	F3	H4
R932	F3	H4
R933	F2	H4
R934	F1	H3
R940	F2	H4
R941	F3	H4
R942	F3	H4
R950	F5	H5
R951	F5	H5
R952	F5	H5
R953	F5	H5
R960	E1	H6
R961	E1	H6
R962	E1	H6
R963	D1	H6
R964	D1	H6*
R965	D1	G6*
R970	A5	J7
R971	A1	J7
R972	B1	H7
R973	A2	H7
R980	B3	J7
R981	A3	J8
R982	A3	J8
R983	A3	J8
R984	A3	H8
R987	B5	H9*
R988	B5	H9*
R989	B5	H9*
R990	B5	H9*
R991	A2	J8
R993	A5	H8
R994	A5	H8
R995	A5	H8
TP775	C1	G7
TP861	E1	H6
TP875	C1	G7
TP880	B1	H8
U660	E2	E6
U730A	H2	F4
U730B	H1	F4
U750A	H5	F5
U750B	H4	F5
U780	C3	G7
U850A	G5	H5
U850B	G4	H5
U880A	B1	G7
U880B	B1	G7
U890B	C4	H8
U890	B4	H8
U930A	G3	H4
U930B	F1	H4
U980A	A2	H7
U980B	A1	H7
U990	B5	H8
U1020A	C4	H2

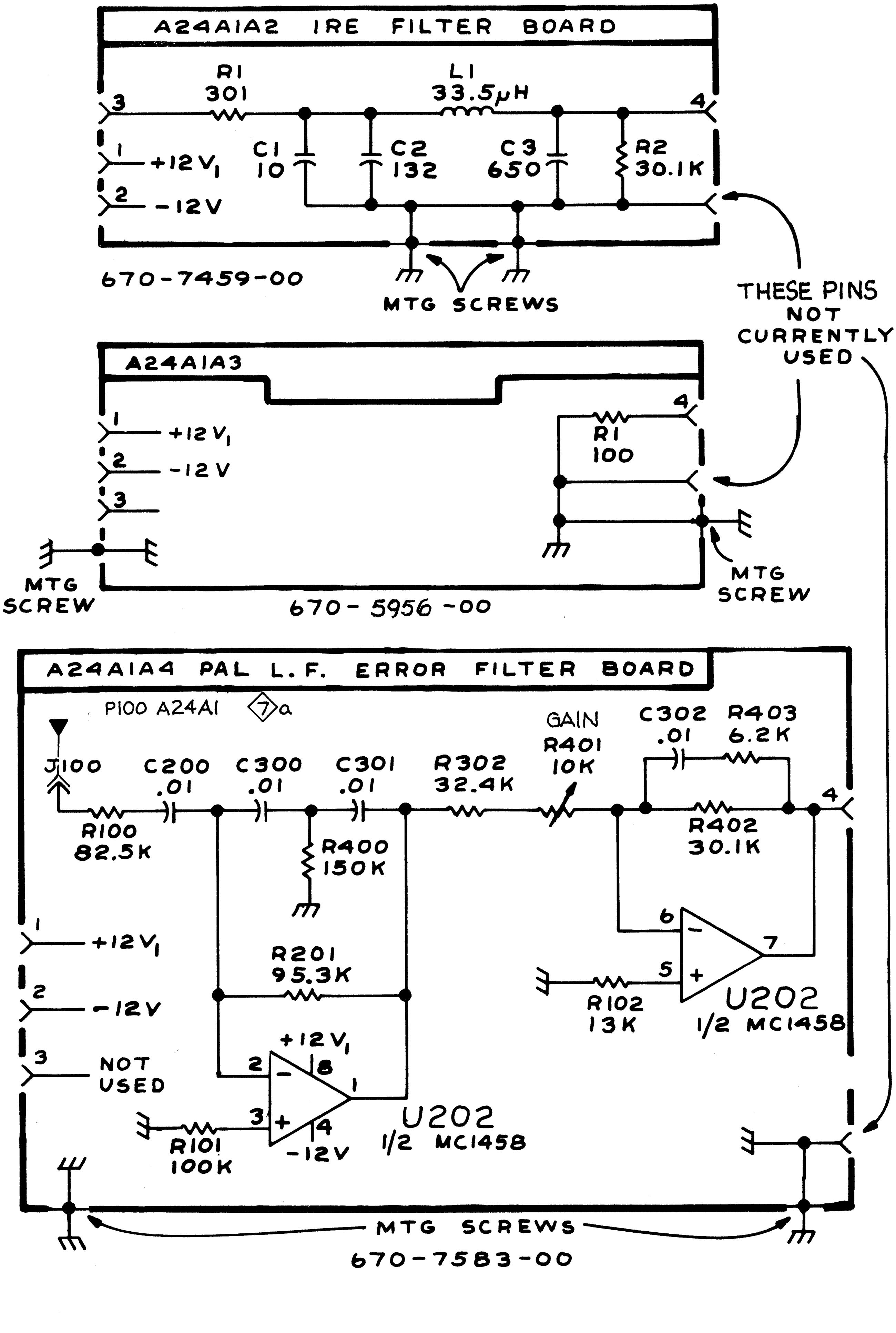
* mounted on Back of Board

Static Sensitive Devices
See Maintenance Section

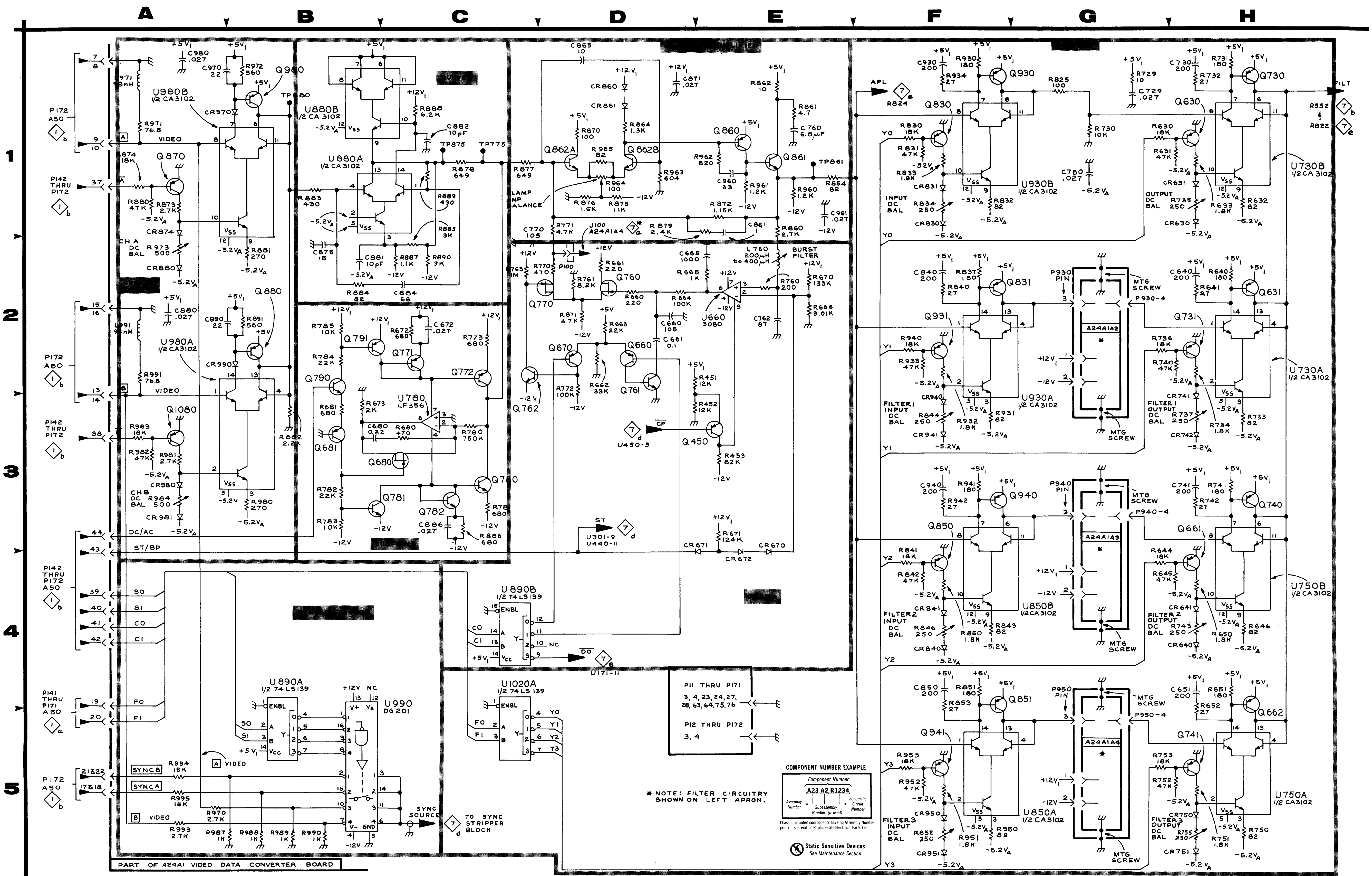
COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.



A24A1A2 IRE FILTER BOARD
R1 301
L1 33.5µH
C1 10
C2 132
C3 650
R2 30.1K
+12V1
-12V
670-7459-00
MTG SCREWS
THESE PINS NOT CURRENTLY USED
A24A1A3
+12V1
-12V
R1 100
MTG SCREW
MTG SCREW
670-5956-00
A24A1A4 PAL L.F. ERROR FILTER BOARD
P100 A24A1 7a
J100
C200 .01
C300 .01
C301 .01
R302 32.4K
GAIN R401 10K
C302 .01
R403 6.2K
R402 30.1K
R100 82.5K
R400 150K
R201 95.3K
+12V1
-12V
NOT USED
R101 100K
U202 1/2 MC1458
R102 13K
U202 1/2 MC1458
MTG SCREWS
670-7583-00



1980

2921- 120

INPUT AMPLIFIERS 7a
670-5695-00

INPUT AMPLIFIERS
P/O A24A1 670-5695-00

7a

GAIN CONTROL AMPLIFIERS DIAGRAM ⟨7⟩ b

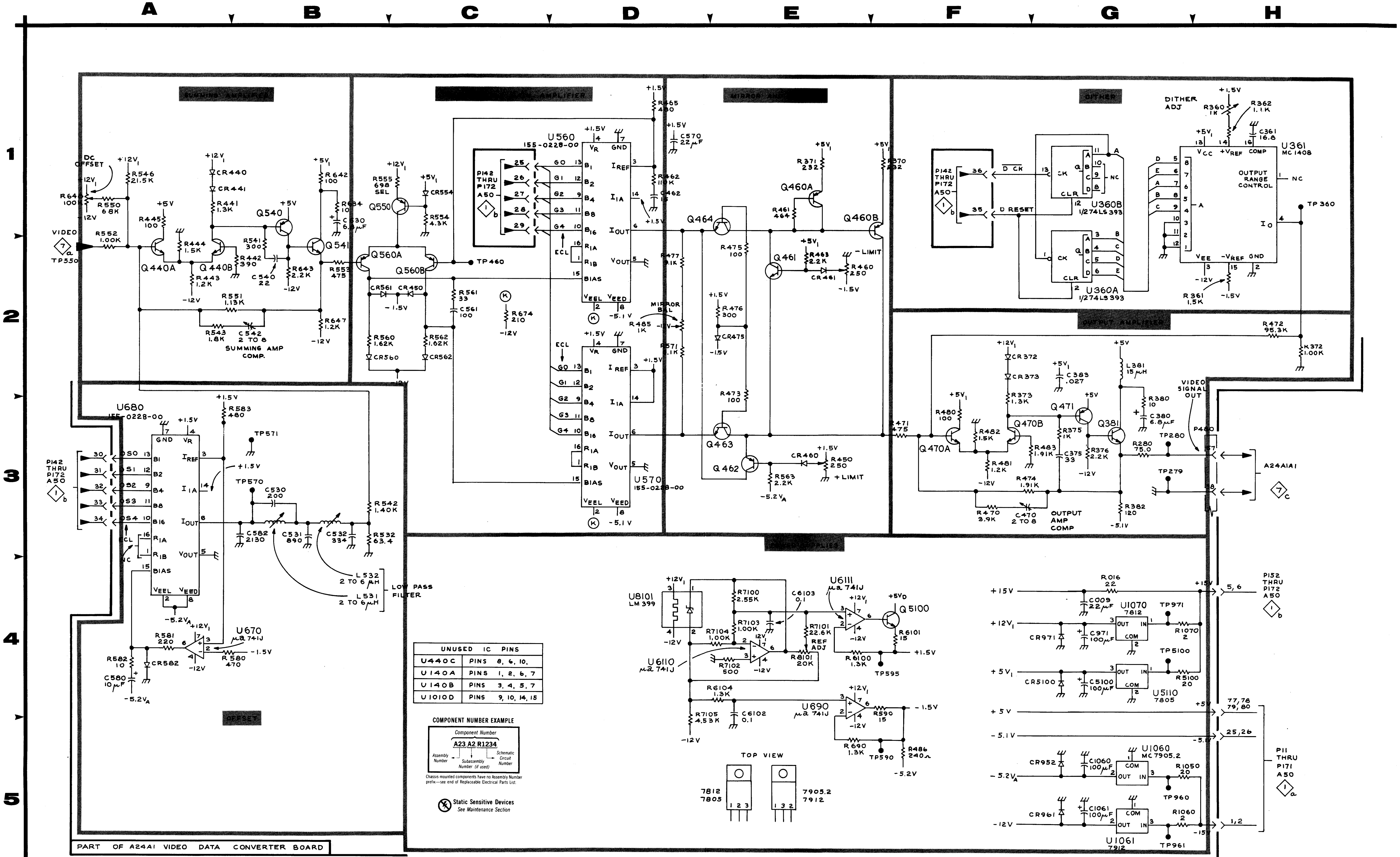
ASSEMBLY A24 *Partial A24 also shown on diagrams 7a, 7d and 7e*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C9	G4	A1
C361	H1	C6
C375	G3	C7
C380	G3	C7
C383	G2	D7*
C462	D1	E6
C470	F3	D6
C530	B3	E3
C531	B3	E3
C532	B3	E4
C540	B2	E4
C542	B2	E5
C561	C2	E6
C570	D1	E7
C580	A4	E7
C582	B3	E7
C630	B1	E4
C971	G4	J6
C1060	G5	J6
C1061	G5	J6
C5100	G4	E9
C6102	E4	F9
C6103	E4	F9
CR372	F2	C7
CR373	F2	C7
CR440	A1	E4
CR441	A1	E4
CR450	C2	D5
CR460	E3	D6
CR461	E2	D6
CR475	E2	D7
CR554	C1	E5
CR560	B2	E6
CR561	B2	E5
CR562	C2	E6
CR582	A4	E7
CR952	G5	H5
CR961	G5	H6
CR971	G4	H7
CR5100	G4	E9
L381	G2	C7
L531	B3	E3
L532	B3	E4
P480	H3	E8
Q381	G2	D7
Q440A	A2	E5
Q440B	A2	E5
Q460A	E1	D6
Q460B	E1	D6
Q461	E2	D6
Q462	E3	D6
Q463	E3	D6
Q464	D1	D6
Q470A	F3	D7
Q470B	F3	D7
Q471	G2	D7
Q540	B1	E4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
Q541	B2	E4
Q550	B1	E5
Q560A	B2	E6
Q560B	C2	E6
Q5100	F4	E9
R16	G4	A2
R280	G3	C7
R360	H1	C6
R361	H2	C6
R362	H1	C6
R370	F1	C6
R371	E1	C6
R372	H2	C7
R373	F2	C7
R375	G3	C7
R376	G3	C7
R380	G3	C7
R382	G2	C7
R441	A1	E4
R442	B2	E4
R443	A2	E4
R444	A2	E4
R445	A1	E5
R450	E3	D5
R460	E2	D6
R461	E1	D6
R462	D1	D6
R463	E2	D6
R465	D1	E6*
R470	F3	D7
R471	F3	D6
R472	H2	D6
R473	E2	D6
R474	F3	D6
R475	E2	D7
R476	E2	D7
R477	D2	D7
R480	F3	D7
R481	F3	E7
R482	F3	D7
R483	F3	E7
R485	D2	E7
R486	F5	E8*
R532	B3	E4
R541	B2	E4
R542	B3	E4
R543	A2	E5
R546	A1	E5
R550	A1	E5
R551	A2	E5
R552	A2	E5
R553	B2	E5
R553	B2	E5
R554	C1	E5
R555	B1	E5
R560	B2	E5
R561	C2	E6
R562	C2	E6
R563	E3	E6
R571	D2	E7

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R580	A4	E7
R581	A4	E7
R582	A4	E7
R583	A3	E8*
R590	F4	E8
R621-3	B1	F2
R634	B1	E4
R642	B1	E4
R643	B2	E4
R647	B2	E5
R648	A1	E5
R674	C2	E6
R690	E5	F8
R1050	G5	J5
R1060	G5	J5
R1070	G4	J6
R5100	G4	E9
R6100	E4	F9
R6101	F4	F9
R6104	E4	F9
R7100	E4	G9
R7101	E4	G9
R7102	E4	G9
R7103	E4	G9
R7104	E4	G9
R7105	D4	G9
R8101	E4	G9
TP279	G3	C7
TP280	G3	C7
TP360	H1	C6
TP460	C2	D6
TP570	B3	E7
TP571	B3	E7
TP590	F5	E8
TP595	F4	E9
TP960	G5	H6
TP961	G5	H6
TP971	G4	H7
TP5100	G4	D9
U140A	C4	B4
U140B	C4	B4
U360A	G2	C6
U360B	G1	C6
U361	H1	C6
U440C	C4	D4
U560	D1	E6
U570	D3	E7
U670	A4	E7
U680	A3	E8
U690	E4	F8
U1010D	C4	H2
U1060	G5	J6
U1061	G5	J6
U1070	G4	J6
U5110	G4	E9
U6110	D4	F9
U6111	E4	F9
U8101	D4	G9

***mounted on Back of Board**


SUMMING AMPLIFIER
AMPLIFIER
MIRROR
DITHER
OUTPUT AMPLIFIER
OFFSET
VIDEO
TP550
DC OFFSET
SUMMING AMP COMP.
U560 155-0228-00
U570 155-0228-00
U680 155-0228-00
P142 THRU P172 A50
MIRROR BAL
DITHER ADJ
U361 MC1408
OUTPUT RANGE CONTROL
U360B 1/274LS393
U360A 1/274LS393
VIDEO SIGNAL OUT
A24A1A1
OUTPUT AMP COMP
LOW PASS FILTER
U8101 LM399
REF ADJ
TOP VIEW
P152 THRU P172 A50
P11 THRU P171 A50
UNUSED IC PINS
U440C PINS 8, 6, 10,
U140A PINS 1, 2, 6, 7
U140B PINS 3, 4, 5, 7
U1010D PINS 9, 10, 14, 15
COMPONENT NUMBER EXAMPLE
A23 A2 R1234
Static Sensitive Devices
See Maintenance Section
PART OF A24A1 VIDEO DATA CONVERTER BOARD

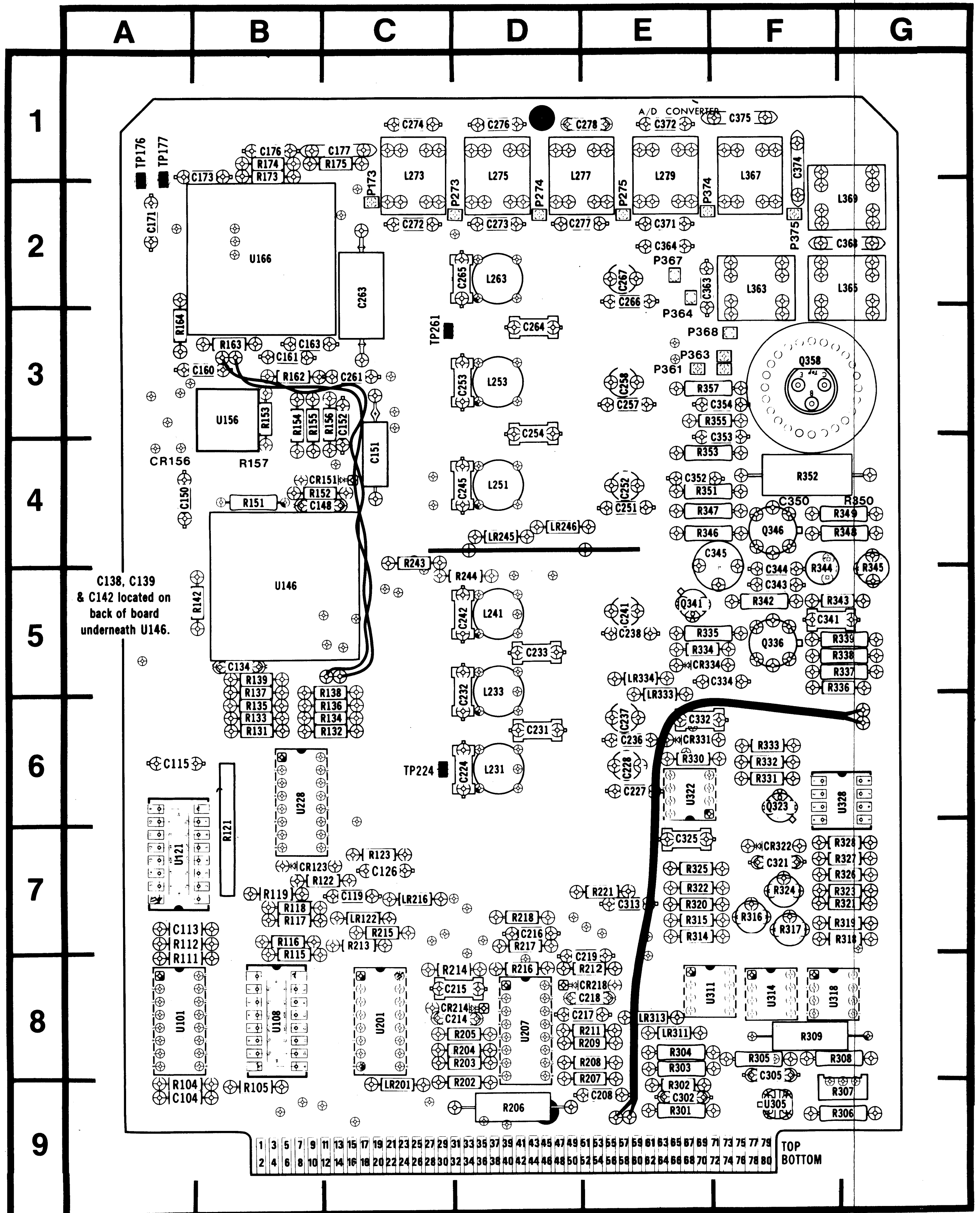


Fig. 10-11. A-D-Converter component locations.

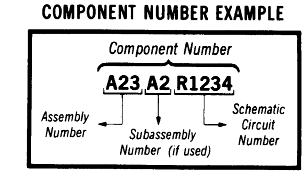
A-D CONVERTER DIAGRAM 7 c

ASSEMBLY A1

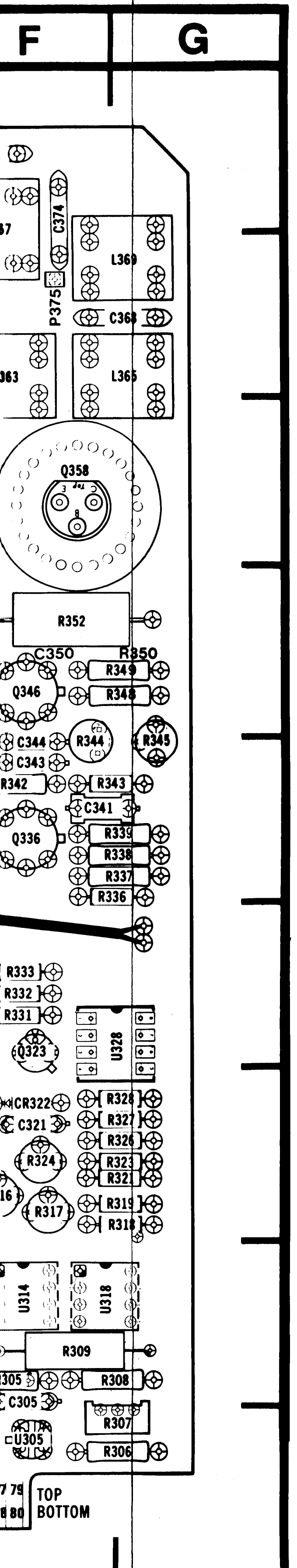
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C104	J7	A9	C276	E2	D1	LR246	A4	D4	R139	F7	[illegible]
C113	H7	A7	C277	D1	E2	LR311	A6	E8	R142	H5	[illegible]
C115	H8	A6	C278	D2	E1	LR313	A3	E8	R151	G2	[illegible]
C119	D8	C7	C302	B4	E9	LR333	A5	E6	R152	G3	[illegible]
C126	E8	C7	C305	A3	F8	LR334	A2	E5	R153	F5	[illegible]
C134	I4	B5	C313	G3	E7				R154	F3	[illegible]
C138	I3	A5*	C321	G3	F7	P173	E1	C2	R155	G3	[illegible]
C139	H3	A5*	C325	D4	E7	P273	E1	D2	R156	E4	[illegible]
C142	H3	A5*	C332	D4	E6	P274	D1	D2	R157	F4	[illegible]
C148	G4	B4	C334	A1	F5	P275	D1	E2	R162	F4	[illegible]
C150	H4	A4	C341	B1	F5	P361	C2	E3	R163	E6	[illegible]
C151	E4	C4	C343	C1	F5	P363	C2	E3	R164	E5	[illegible]
C152	E4	C3	C344	C1	F5	P364	C1	E3	R173	C5	[illegible]
C160	F6	B3	C345	C1	F4	P367	D1	E2	R174	D3	[illegible]
C161	E5	B3	C350	B2	G4	P368	C2	E3	R175	E3	[illegible]
C163	E5	B3	C352	A2	E4	P374	D2	E2	R202	B7	[illegible]
C171	E6	A2	C353	B2	F4	P375	D1	F2	R203	B6	[illegible]
C173	C5	B1	C354	B1	F3				R204	B7	[illegible]
C176	D2	B1	C363	C1	E2	Q323	F3	F6	R205	B7	[illegible]
C177	E2	C1	C364	D2	E2	Q336A	A1	F5	R206	A7	[illegible]
C208	A7	E9	C368	C2	G2	Q336B	B1	F5	R207	B7	[illegible]
C214	B7	D8	C371	D2	E2	Q341	A1	E5	R208	A7	[illegible]
C215	B7	D8	C372	D2	E1	Q346A	B2	F4	R209	A7	[illegible]
C216	C7	D7	C374	D2	F1	Q346B	B2	F4	R211	B8	[illegible]
C217	B8	E8	C375	D2	F1	Q358	C1	F3	R212	C7	[illegible]
C218	B8	E8							R213	C8	[illegible]
C219	C7	E8	CR123	E8	B7	R104	J7	A9	R214	B7	[illegible]
C224	C7	D6	CR151	D4	B4	R105	J7	B9	R215	H8	[illegible]
C227	C7	E6	CR156	G5	A4	R111	I6	A8	R216	C8	[illegible]
C228	C7	E6	CR214	B7	D8	R112	J6	A7	R217	B7	[illegible]
C231	C7	D6	CR218	B8	E8	R115	H8	B7	R218	C7	[illegible]
C232	D7	D5	CR322	G3	F7	R116	H8	B7	R221	C4	[illegible]
C233	D7	D5	CR331	D4	E6	R117	H8	B7	R243	F5	[illegible]
C236	C7	E6	CR334	B1	E5	R118	H8	B7	R244	F6	[illegible]
C237	D7	E6				R119	I8	B7	R301	B3	[illegible]
C238	D7	E5	L231	C7	D6	R121-10	I8	B6	R302	B4	[illegible]
C241	D7	E5	L233	C7	D5	R121-2	G8	B6	R303	B3	[illegible]
C242	D7	D5	L241	D7	D5	R121-3	I8	B6	R304	B4	[illegible]
C245	G1	D4	L251	G2	D4	R121-4	G8	B6	R305	B3	[illegible]
C251	G2	E4	L253	F2	D3	R121-5	I8	B6	R306	B4	[illegible]
C252	G2	E4	L263	F2	D2	R121-6	G8	B6	R307	A4	[illegible]
C253	F1	D3	L273	E2	C1	R121-7	G8	B6	R308	A3	[illegible]
C254	G2	D3	L275	E2	D1	R121-8	I8	B6	R309	C3	[illegible]
C257	F2	E3	L277	D2	E1	R121-9	G8	B6	R314	C4	[illegible]
C258	F2	E3	L279	D1	E1	R122	E7	B7	R315	C4	[illegible]
C261	C5	C3	L363	C1	F2	R123	E7	C7	R316	D4	[illegible]
C263	F1	C2	L365	D2	G2	R131	E7	B6	R317	G3	[illegible]
C264	F2	D3	L367	D2	F1	R132	E6	C6	R318	C3	[illegible]
C265	C5	D2	L369	D1	G2	R133	E7	B6	R319	B3	[illegible]
C266	F2	E2				R134	E6	C6	R320	D4	[illegible]
C267	F2	E2	LR122	A5	C7	R135	E7	B6	R321	G3	[illegible]
C272	E1	C2	LR201	J8	C9	R136	E7	B5	R322	D3	[illegible]
C273	E1	D2	LR216	A5	C7	R137	F7	B5	R323	G3	[illegible]
C274	E2	C1	LR245	A4	D4	R138	E7	C5	R324	F3	[illegible]

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.



A-D CONVERTER DIAGRAM ⟨7⟩ c

ASSEMBLY A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C104	J7	A9	C276	E2	D1	LR246	A4	D4	R139	F7	B5	R325	D4	E7
C113	H7	A7	C277	D1	E2	LR311	A6	E8	R142	H5	B5	R326	G3	G7
C115	H8	A6	C278	D2	E1	LR313	A3	E8	R151	G2	B4	R327	G3	G7
C119	D8	C7	C302	B4	E9	LR333	A5	E6	R152	G3	B4	R328	G3	G7
C126	E8	C7	C305	A3	F8	LR334	A2	E5	R153	F5	B3	R330	D4	E6
C134	I4	B5	C313	G3	E7				R154	F3	B3	R331	G3	F6
C138	I3	A5*	C321	G3	F7	P173	E1	C2	R155	G3	B3	R332	F3	F6
C139	H3	A5*	C325	D4	E7	P273	E1	D2	R156	E4	C3	R333	F3	F6
C142	H3	A5*	C332	D4	E6	P274	D1	D2	R157	F4	B4	R334	B1	E5
C148	G4	B4	C334	A1	F5	P275	D1	E2	R162	F4	B3	R335	B1	E5
C150	H4	A4	C341	B1	F5	P361	C2	E3	R163	E6	B3	R335	B2	E5
C151	E4	C4	C343	C1	F5	P363	C2	E3	R164	E5	A3	R336	A1	G5
C152	E4	C3	C344	C1	F5	P364	C1	E3	R173	C5	B1	R337	A1	G5
C160	F6	B3	C345	C1	F4	P367	D1	E2	R174	D3	B1	R338	A2	G5
C161	E5	B3	C350	B2	G4	P368	C2	E3	R175	E3	C1	R339	B2	G5
C163	E5	B3	C352	A2	E4	P374	D2	E2	R202	B7	D9	R342	B2	F5
C171	E6	A2	C353	B2	F4	P375	D1	F2	R203	B6	D8	R343	B1	G5
C173	C5	B1	C354	B1	F3				R204	B7	D8	R344	C1	F5
C176	D2	B1	C363	C1	E2	Q323	F3	F6	R205	B7	D8	R345	B1	G4
C177	E2	C1	C364	D2	E2	Q336A	A1	F5	R206	A7	D9	R346	C1	E4
C208	A7	E9	C368	C2	G2	Q336B	B1	F5	R207	B7	E8	R347	B2	E4
C214	B7	D8	C371	D2	E2	Q341	A1	E5	R208	A7	E8	R348	B1	G4
C215	B7	D8	C372	D2	E1	Q346A	B2	F4	R209	A7	E8	R349	B2	G4
C216	C7	D7	C374	D2	F1	Q346B	B2	F4	R211	B8	E8	R350	B2	G4
C217	B8	E8	C375	D2	F1	Q358	C1	F3	R212	C7	E8	R351	C2	E4
C218	B8	E8							R213	C8	C7	R352	C2	F4
C219	C7	E8	CR123	E8	B7	R104	J7	A9	R214	B7	D8	R353	C2	E4
C224	C7	D6	CR151	D4	B4	R105	J7	B9	R215	H8	C7	R355	B2	F3
C227	C7	E6	CR156	G5	A4	R111	I6	A8	R216	C8	D8	R357	C2	E3
C228	C7	E6	CR214	B7	D8	R112	J6	A7	R217	B7	D7			
C231	C7	D6	CR218	B8	E8	R115	H8	B7	R218	C7	D7	TP176	E5	A1
C232	D7	D5	CR322	G3	F7	R116	H8	B7	R221	C4	E7	TP177	C5	A1
C233	D7	D5	CR331	D4	E6	R117	H8	B7	R243	F5	C4	TP224	C8	C6
C236	C7	E6	CR334	B1	E5	R118	H8	B7	R244	F6	D5	TP261	E2	C3
C237	D7	E6				R119	I8	B7	R301	B3	E9			
C238	D7	E5	L231	C7	D6	R121-10	I8	B6	R302	B4	E9	U101	I7	A8
C241	D7	E5	L233	C7	D5	R121-2	G8	B6	R303	B3	E8	U108	J6	B8
C242	D7	D5	L241	D7	D5	R121-3	I8	B6	R304	B4	E8	U121	H6	A7
C245	G1	D4	L251	G2	D4	R121-4	G8	B6	R305	B3	F8	U146	I4	B5
C251	G2	E4	L253	F2	D3	R121-5	I8	B6	R306	B4	G9	U156	G5	B3
C252	G2	E4	L263	F2	D2	R121-6	G8	B6	R307	A4	G9	U166	D4	B2
C253	F1	D3	L273	E2	C1	R121-7	G8	B6	R308	A3	G8	U201	J5	C8
C254	G2	D3	L275	E2	D1	R121-8	I8	B6	R309	C3	F8	U207A	B7	D8
C257	F2	E3	L277	D2	E1	R121-9	G8	B6	R314	C4	E7	U207B	B6	D8
C258	F2	E3	L279	D1	E1	R122	E7	B7	R315	C4	E7	U207C	B8	D8
C261	C5	C3	L363	C1	F2	R123	E7	C7	R316	D4	F7	U228A	E7	B6
C263	F1	C2	L365	D2	G2	R131	E7	B6	R317	G3	F7	U228B	E7	B6
C264	F2	D3	L367	D2	F1	R132	E6	C6	R318	C3	G7	U228C	E6	B6
C265	C5	D2	L369	D1	G2	R133	E7	B6	R319	B3	G7	U305	B4	F9
C266	F2	E2				R134	E6	C6	R320	D4	E7	U311	C4	F8
C267	F2	E2	LR122	A5	C7	R135	E7	B6	R321	G3	G7	U314	B3	F8
C272	E1	C2	LR201	J8	C9	R136	E7	B5	R322	D3	E7	U318	C3	F8
C273	E1	D2	LR216	A5	C7	R137	F7	B5	R323	G3	G7	U322	D4	E6
C274	E2	C1	LR245	A4	D4	R138	E7	C5	R324	F3	F7	U328	G3	G6

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

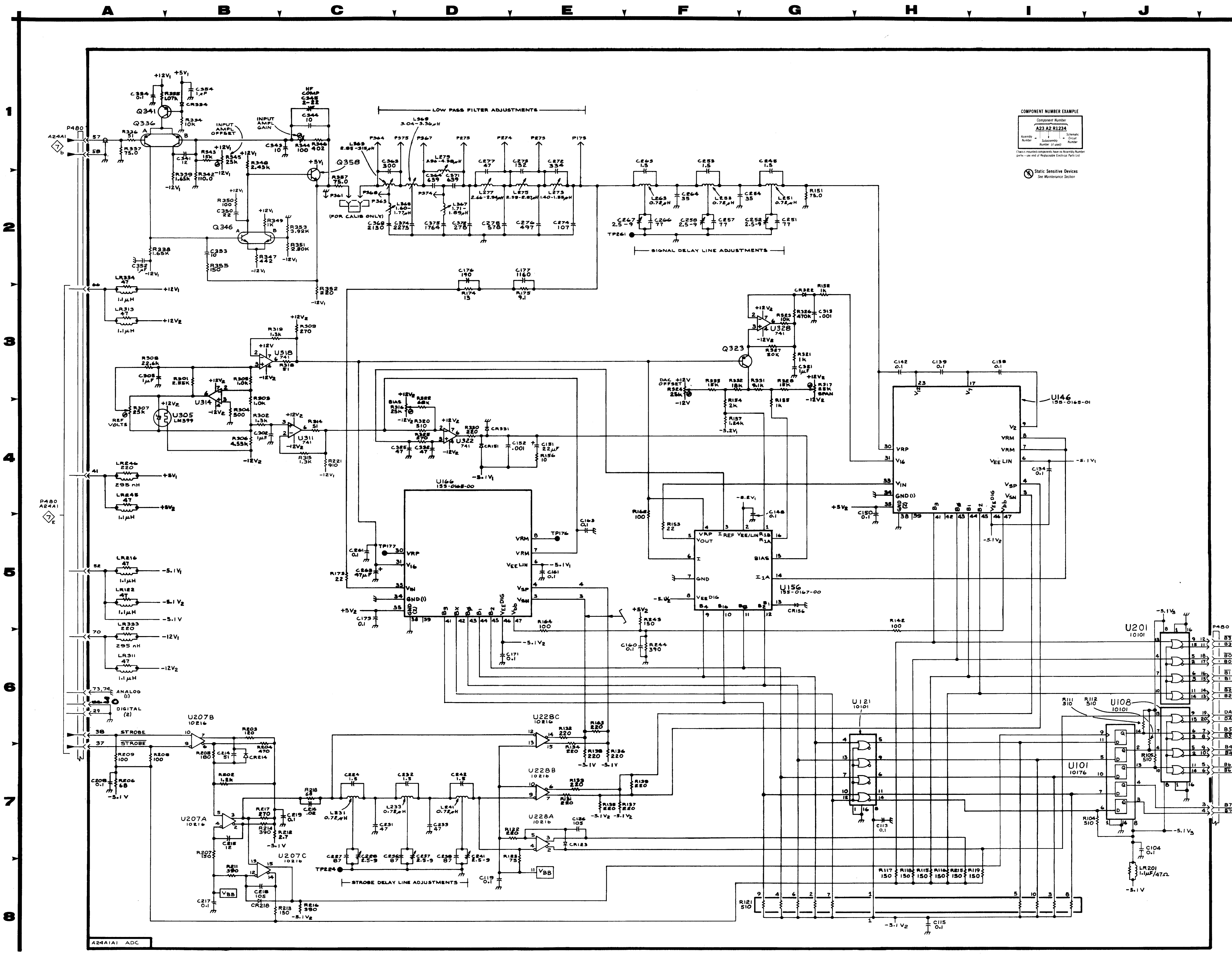
Component Number

A23 A2 R1234

Assembly Number — *Subassembly Number (if used)* — *Schematic Circuit Number*

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

A-D CONVERTER A24A1A1 670-5269-00



1980

2921-122

ADC 7c

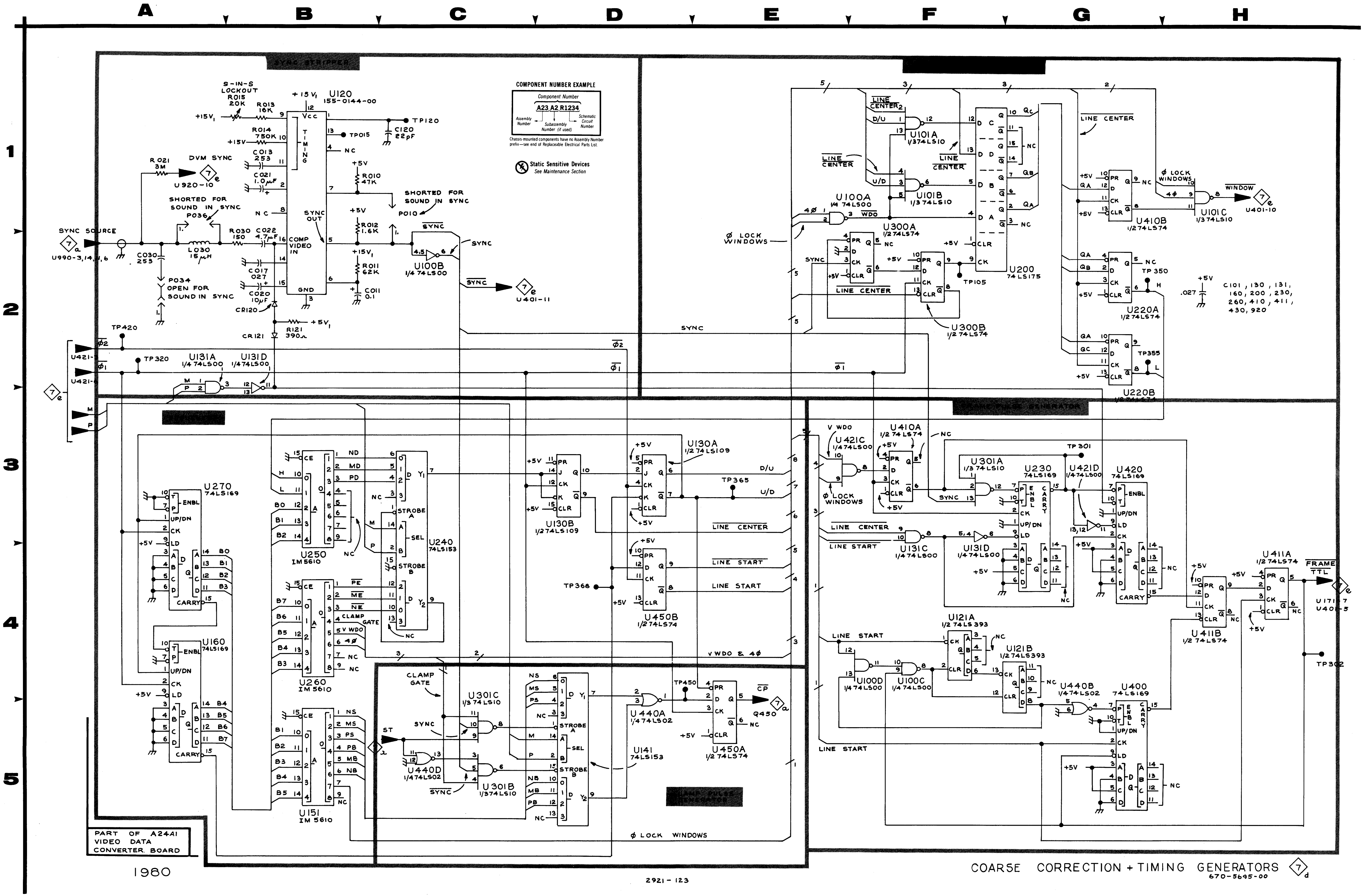
670-5269-00

TIMING GENERATORS DIAGRAM ⟨7⟩ d

ASSEMBLY A24 *Partial A24 also shown on diagrams 7a, 7b and 7e*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C11	B2	A2	R14	B1	A2	U131C	F3	B3
C13	B1	A2	R15	B1	A2	U131D	B2	B3
C17	B2	A2	R21	A1	A3	U131D	F3	B3
C20	B2	A2	R30	B2	A3	U141	D5	B4
C21	B1	A3	R121	B2	B3	U151	B5	B5
C22	B2	A3				U160	A4	B6
C30	A2	A3	TP15	B1	A2	U200	F1	C1
C101	H2	B2	TP105	F1	B1	U220A	G2	C2
C120	C1	B2*	TP120	C1	A3	U220B	G2	C2
C130	H2	B3	TP301	G3	C2	U230	G3	C3
C131	H2	B4	TP302	H4	D2	U240	C3	C4
C160	H2	B6	TP320	A2	D3	U250	B3	C5
C200	H2	C2	TP350	G2	C5	U260	B4	C6
C230	H2	C3	TP355	G2	C5	U270	A3	C7
C260	H2	C6	TP365	E3	C5	U300A	F1	C1
C410	H2	D2	TP368	D4	C5	U300B	F1	C1
C411	H2	D2	TP420	A2	D3	U301A	F3	D1
C430	H2	D3	TP450	D4	D5	U301B	C5	D1
						U301C	C5	D1
CR120	B2	B3	U100A	E1	B1	U400	G5	D1
CR121	B2	B3	U100B	C2	B1	U410A	F3	D2
			U100C	F4	B1	U410B	G1	D2
L30	A2	A3	U100D	F4	B1	U411A	H4	D2
			U101A	F1	B1	U411B	H4	D2
P10	C1	A1	U101B	F1	B1	U420	G3	D3
P34	A2	A4	U101C	H1	B1	U421C	E3	D3
P36	A1	A4	U120	B1	B2	U421D	G3	D3
			U121A	F4	B2	U440A	D5	D4
R10	B1	A1	U121B	G4	B2	U440B	G5	D4
R11	B2	A2	U130A	D3	B3	U440D	C5	D4
R12	B1	A2	U130B	D3	B3	U450A	E5	D5
R13	B1	A2	U131A	A2	B3	U450B	D4	D5

***mounted on Back of Board**



1980

2921-123

COARSE CORRECTION + TIMING GENERATORS 7d
670-5695-00

COARSE CORRECTION
P/O A24A1 670-5695-00

PHASE LOCK AND DVM DIAGRAM ⟨7⟩ e

ASSEMBLY A24 *Partial A24 also shown on diagrams 7a, 7b and 7d*

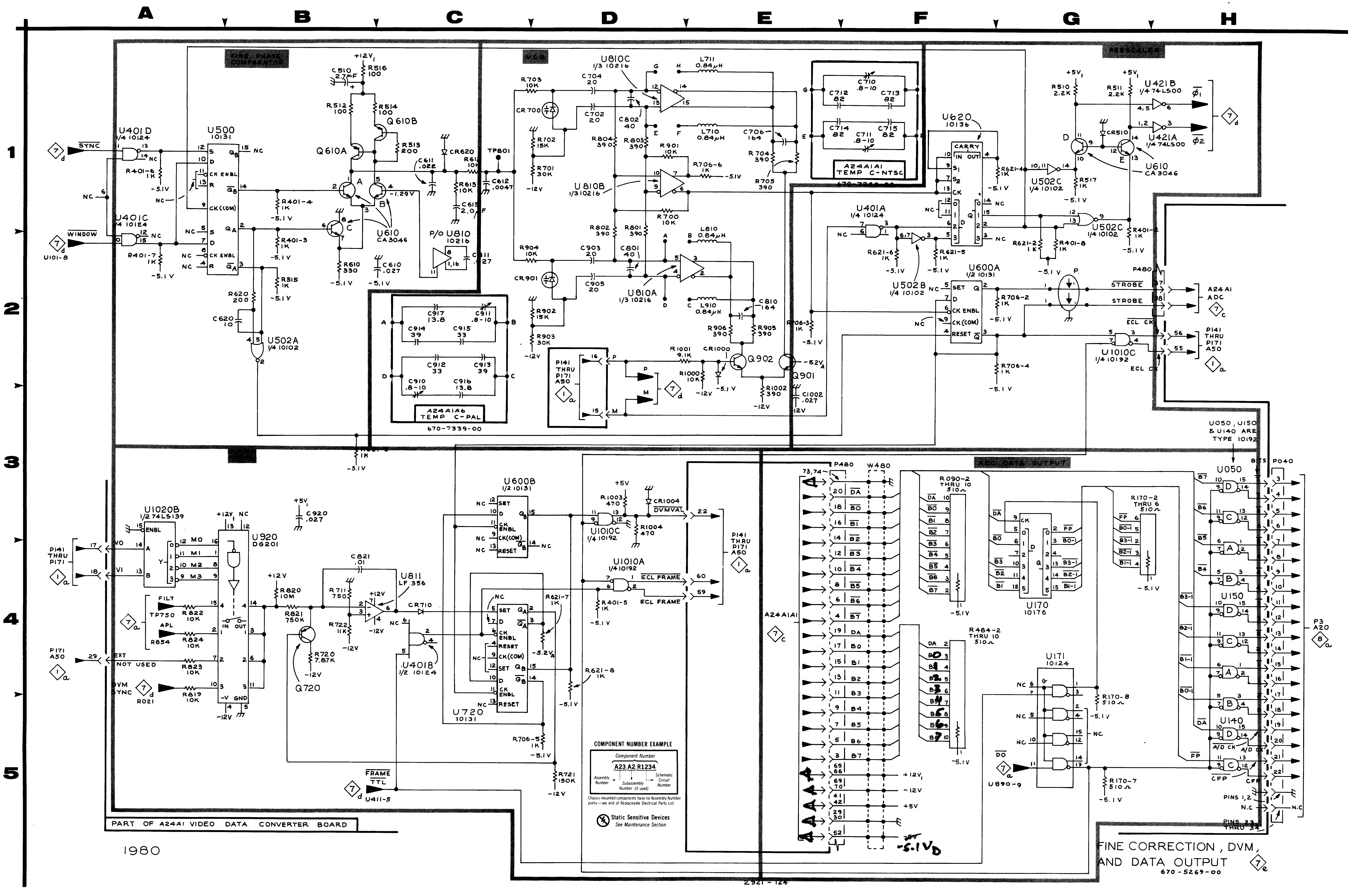
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C510	B1	E2	R401-3	B2	E1	R901	D1	H1
C610	C2	F2	R401-4	B1	E1	R902	D2	H1
C611	C1	F2	R401-5	D4	E1	R903	D2	H1
C612	C1	F2	R401-6	A1	E1	R904	D2	H1
C613	C1	F2	R401-7	A2	E1	R905	E2	H1
C620	B2	F2	R401-8	G2	E1	R906	E2	H1
C702	D1	G1	R4840	F4	D7	R1000	E2	J1
C704	D1	F1	R484-2	F4	D7	R1001	D2	J1
C706	E1	G2	R484-3	F4	D7	R1002	E3	J1
C801	D2	G1	R484-4	F4	D7	R1003	D3	J1
C802	D1	G1	R484-5	F4	D7	R1004	D3	J1
C810	E2	G2	R484-6	F4	D7			
C811	C2	G2	R484-7	F4	D7	TP801	C1	G1
C821	B4	G2	R484-8	F4	D7			
C903	D2	H1	R484-9	F4	D7	U50A	H4	A5
C905	D2	H1	R510	G1	E2	U50B	H4	A5
C920	B3	H3	R511	G1	E2	U50C	H3	A5
C1002	E3	J1*	R512	B1	E2	U50D	H3	A5
			R513	C1	E2	U140C	H5	B4
CR510	G1	E2	R514	B1	E2	U140D	H5	B4
CR620	C1	F1*	R515	B2	E2	U150A	H4	A4
CR700	D1	F1	R516	B1	E2	U150B	H5	A4
CR710	C4	G2	R517	G1	E2	U150C	H4	A4
CR901	D2	H1	R610	B2	E2	U150D	H4	A4
CR1000	E2	J1	R612	C1	F2	U170	G4	B7
CR1004	D3	J1	R613	C1	F2	U171	G4	B7
			R620	B2	E2	U401A	F1	D1
L710	E1	F2	R621-2	G2	F2	U401B	C4	D1
L711	E1	G2	R621-4	G1	F2	U401C	A2	D1
L810	E2	H2	R621-5	F2	F2	U401D	A1	D1
L910	E2	H2	R621-6	F2	F2	U421A	H1	D3
			R621-7	D4	F2	U421B	H1	D3
P40	H3	A5	R621-8	D4	F2	U500	A1	E1
P480	F3	E8	R700	D1	G1	U502A	B2	E3
P480	H2	E8	R701	D1	G1	U502B	F2	E3
			R702	D1	G1	U502C	G1	E3
Q610A	B1	F2	R703	D1	G1	U502D	G1	E3
Q610B	C1	F2	R704	E1	G1	U600A	F2	F1
Q720	B4	G2	R705	E1	G1	U600B	C3	F1
Q901	E2	H1	R706-2	G2	F1	U610A	B1	E1
Q902	E2	H1	R706-3	E2	F1	U610B	B1	E1
			R706-4	G2	F1	U610C	B1	E1
R90-0	F3	A9	R706-5	D5	F1	U610D	G1	E1
R90-2	F3	A9	R706-6	E1	F1	U610E	G1	E1
R90-3	F3	A9	R711	B4	G2	U620	F1	F2
R90-4	F3	A9	R720	B4	G3	U720	C4	F2
R90-5	F3	A9	R721	D5	G3	U810A	D2	G1
R90-6	F3	A9	R722	B4	G2	U810B	D1	G1
R90-7	F3	A9	R801	D1	G1	U810C	D1	G1
R90-8	F3	A9	R802	D1	G1	U810	C2	G1
R90-9	F3	A9	R803	D1	G1	U811	C4	H2
R170-2	G3	B6	R804	D1	G1	U920	B3	H2
R170-3	G3	B6	R819	A4	H2	U1010A	D4	H2
R170-4	G3	B6	R820	B4	H2	U1010B	G2	H2
R170-5	G3	B6	R821	B4	H3	U1010C	D3	H2
R170-6	G3	B6	R822	A4	H3	U1020B	A3	H2
R170-7	G5	B6	R823	A4	H3			
R401-2	G1	E1	R824	A4	H3			

***mounted on Back of Board**



Fig. 10-12. A24A1A5–Temp C-N & A24A1A6 Temp C-P component locations.

2921-61



FINE PLL, DVM, DATA OUT
P/O A24A1 670-5695-00

7e

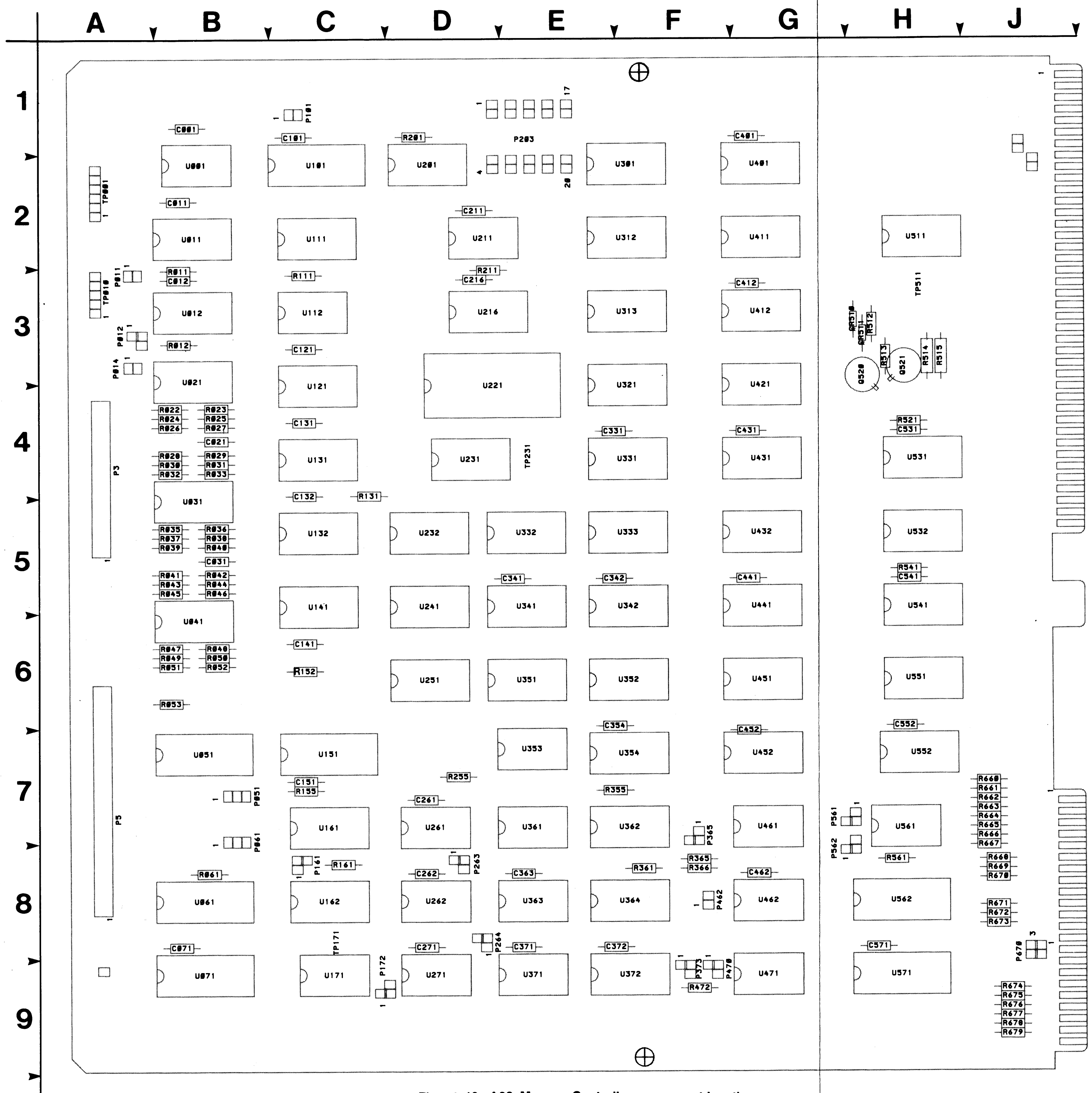
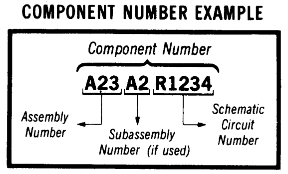


Fig. 10-13. A20–Memory Controller component locations.

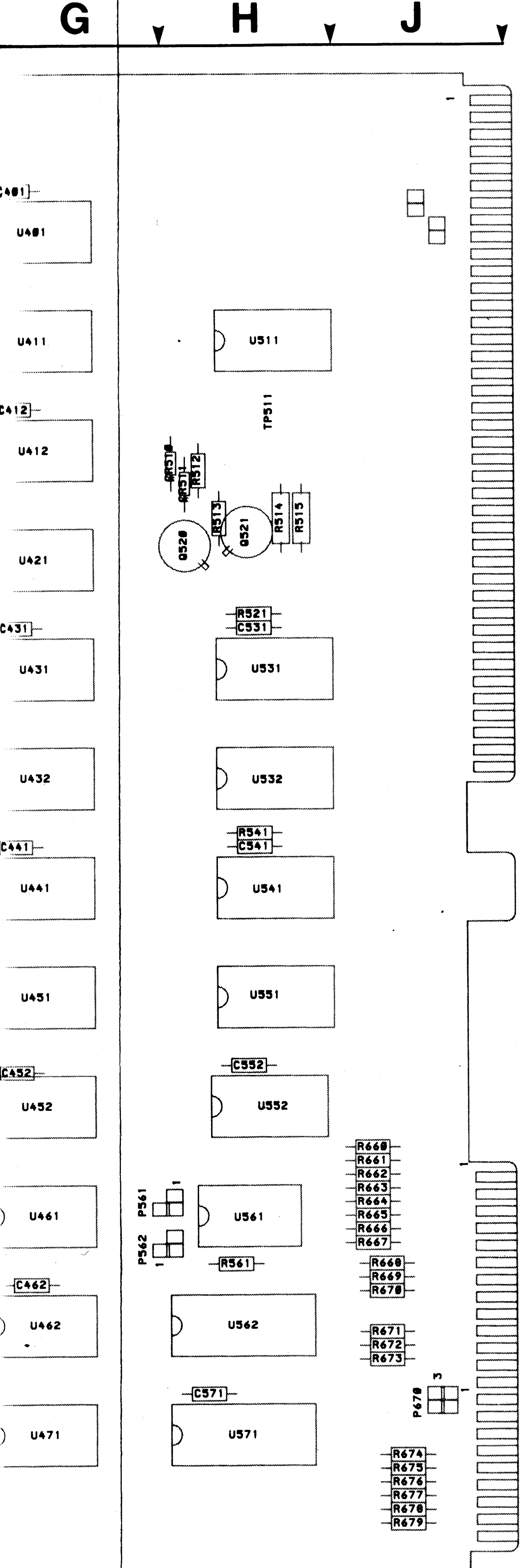
Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

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2921-62

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number

A23 A2 R1234

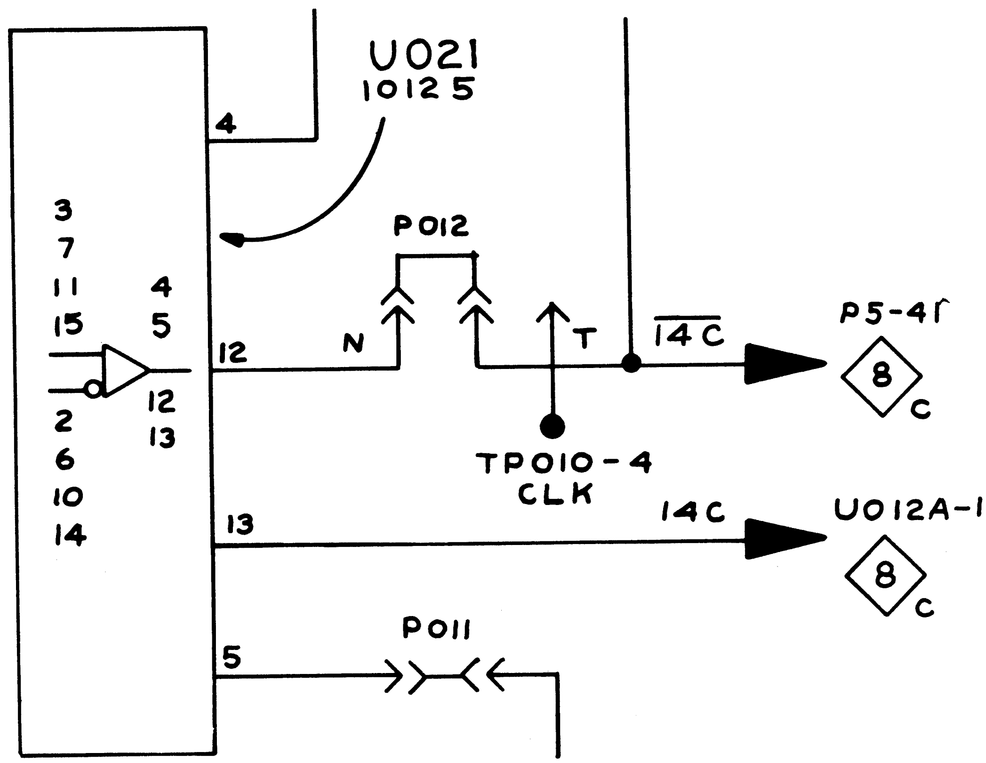
Assembly Number — *Subassembly Number (if used)* — *Schematic Circuit Number*

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

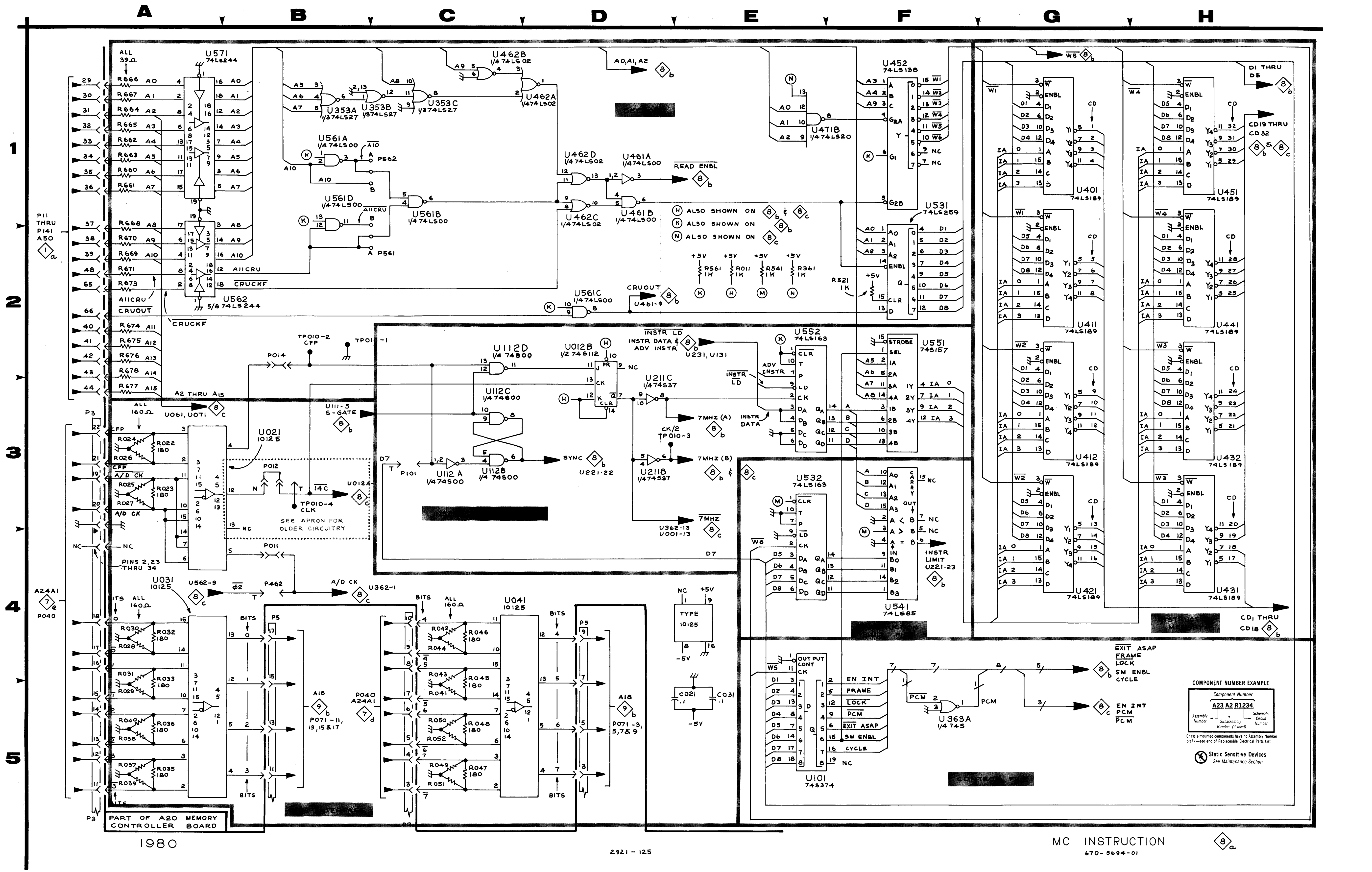
MC INSTRUCTION DIAGRAM ⟨8⟩ a

ASSEMBLY A20 *Partial A20 also shown on diagrams 8b and 8c*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C21	E5	B4	R46	C4	B5	U101	E4	C2
C31	E5	B5	R47	C5	B6	U112A	C3	C3
			R48	C5	B6	U112B	C3	C3
P3	A3	A4	R49	C5	B6	U112C	C3	C3
P3	C5	A4	R50	C5	B6	U112D	C2	C3
P5	B4	A7	R51	C5	B6	U211B	D3	D2
P5	D4	A7	R52	C5	B6	U211C	D3	D2
P11	B4	A3	R361	E2	F8	U353A	B1	E7
P12	B3	A3	R521	F2	H4	U353B	C1	E7
P14	B2	A3	R541	E2	H5	U353C	C1	E7
P101	C3	C1	R561	E2	H8	U363A	F5	E7
P462	B4	F8	R660	A1	J7	U401	G1	G2
P561	C2	G7	R661	A1	J7	U411	G2	G2
P562	C1	G7	R662	A1	J7	U412	G3	G3
			R663	A1	J7	U421	G4	G4
R11	E2	B3	R664	A1	J7	U431	H4	G4
R22	A3	B4	R665	A1	J7	U432	H3	G5
R23	A3	B4	R666	A1	J7	U441	H2	G5
R24	A3	B4	R667	A1	J7	U451	H1	G6
R25	A3	B4	R668	A1	J8	U452	F1	G7
R26	A3	B4	R669	A2	J8	U461A	D1	G7
R27	A3	B4	R670	A2	J8	U461B	D1	G7
R28	A4	B4	R671	A2	J8	U462A	D1	G8
R29	A5	B4	R673	A2	J8	U462B	C1	G8
R30	A4	B4	R674	A2	J9	U462C	D1	G8
R31	A4	B4	R675	A2	J9	U462D	D1	G8
R32	A4	B4	R676	A2	J9	U471B	E1	G9
R33	A4	B4	R677	A3	J9	U531	F2	H4
R35	A5	B5	R678	A2	J9	U532	E3	H5
R36	A5	B5				U541	F4	H5
R37	A5	B5	TP10A	B2	A3	U551	F2	H6
R38	A5	B5	TP10B	B2	A3	U552	E2	H7
R39	A5	B5	TP10C	D3	A3	U561A	B1	H7
R40	A5	B5	TP10D	B3	A3	U561B	C1	H7
R41	C5	B5				U561C	D2	H7
R42	C4	B5	U12B	D2	B3	U561D	B1	H7
R43	C4	B5	U21	A3	B3	U562	A2	H8
R44	C4	B5	U31	A4	B5	U571	A1	H9
R45	C4	B5	U41	C4	B6			


U021
10125
4
3
7
11
15
4
5
12
12
13
2
6
10
14
13
5
P012
N
T
14C
P5-41
8
c
TP010-4
CLK
14C
U012A-1
8
c
P011

670-5694-00



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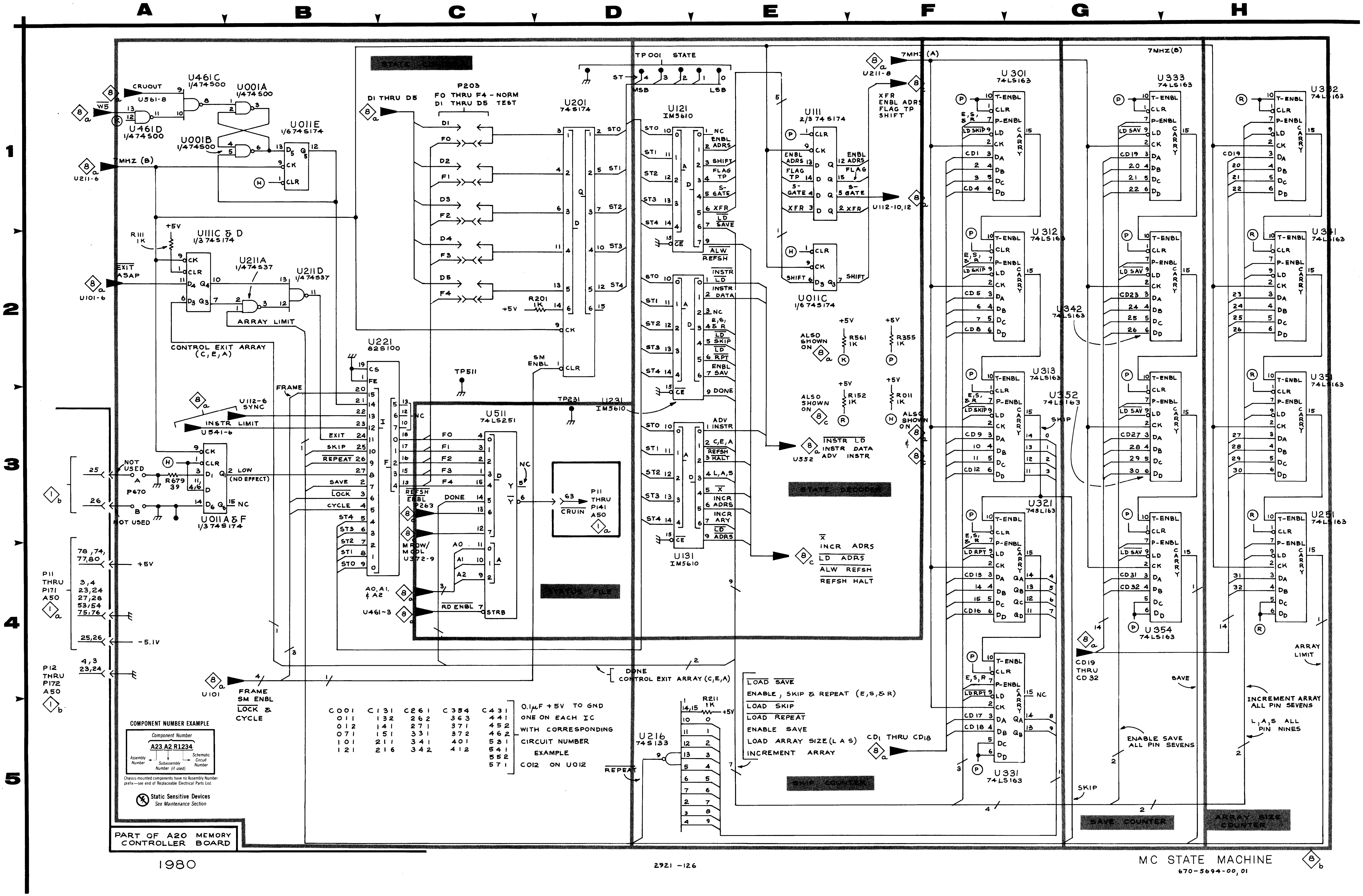
2921-125

MC INSTRUCTION 8a
670-5694-01

MC STATE MACHINE DIAGRAM ⟨8⟩ b

ASSEMBLY A20 *Partial A20 also shown on diagrams 8a and 8c*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	B5	B1
C11	B5	B2
C12	B5	B3
C71	B5	B8
C101	B5	C1
C121	B5	C3
C131	C5	C4
C132	C5	C4
C141	C5	C6
C151	C5	C7
C211	C5	D2
C216	C5	D3
C261	C5	D7
C262	C5	D8
C271	C5	D8
C331	C5	F4
C341	C5	E5
C342	C5	F5
C354	C5	F6
C363	C5	E7
C371	C5	E7
C372	C5	F8
C401	C5	G1
C412	C5	G3
C431	C5	G4
C441	C5	G5
C452	C5	G6
C462	C5	G8
C531	C5	H4
C541	C5	H5
C552	C5	H6
C571	C5	H8
P203	C1	E1
P670	A3	J8
R11	F3	B3
R111	A2	C3
R152	E3	C6
R201	D2	D1
R211	E5	D3
R355	F2	F7
R561	E2	H8
R679	A3	J9
TP1	D1	A2
TP231	D3	E4
TP511	C2	H3
U1A	B1	B2
U1B	A1	B2
U11A	A3	B2
U11C	E2	B2
U11E	B1	B2
U11F	A3	B2
U111C	A2	C2
U111	E1	C2
U121	D1	C4
U131	D3	C4
U201	D1	D2
U211A	B2	D2
U211D	B2	D2
U216	D5	D3
U221	B3	D4
U231	D3	D4
U251	H3	D6
U301	F1	F2
U312	G2	F2
U313	G2	F3
U321	G3	F4
U331	F5	F4
U332	H1	E5
U333	G1	F5
U341	H2	E5
U342	G2	F5
U351	H3	E6
U352	G3	F6
U354	G4	F7
U461C	A1	G7
U461D	A1	G7
U511	C3	H2



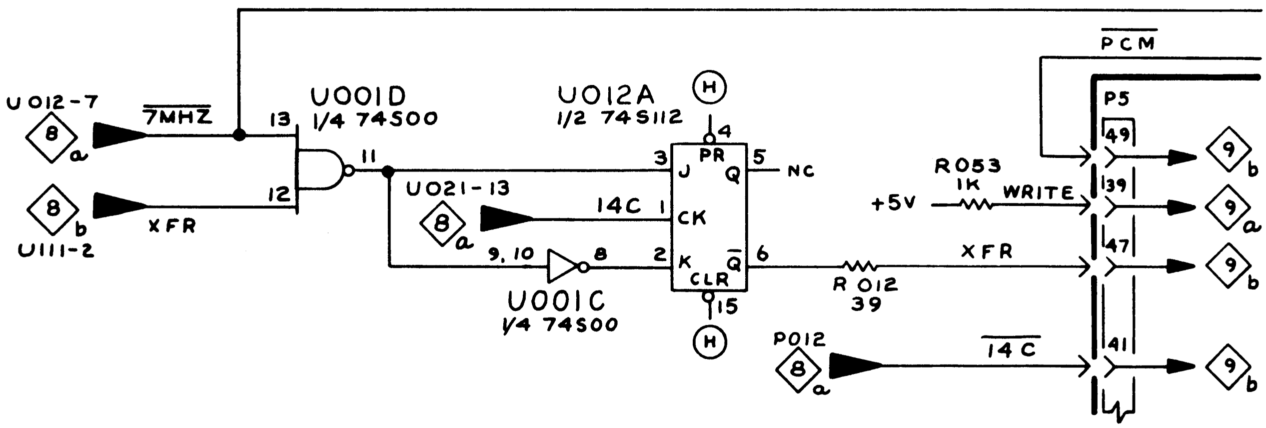
MC STATE MACHINE
P/O A20 670-5694-00, -01

8b

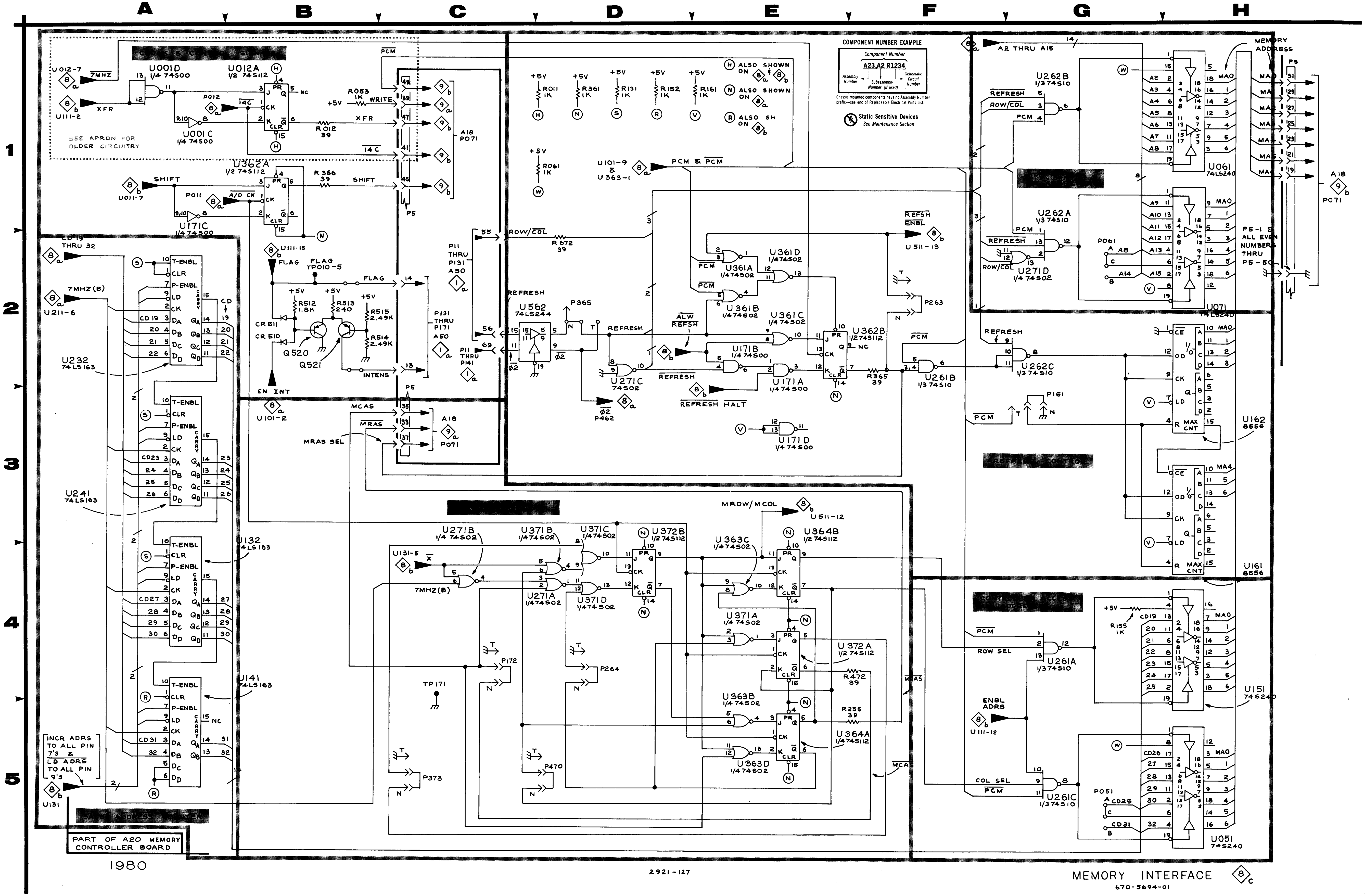
MEMORY INTERFACE DIAGRAM ⟨8⟩ c

ASSEMBLY A20 *Partial A20 also shown on diagrams 8a and 8b*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
CR00510	B2	H3	U12A	B1	B3
CR511	B2	H3	U51	H5	B7
			U61	H1	B8
P5	C1	A7	U71	H2	B9
P5	C3	A7	U132	A4	C5
P5	H1	A7	U141	A5	C5
P51	G5	B7	U151	H4	C7
P61	G2	B7	U161	H4	C7
P161	G3	C8	U162	H3	C8
P172	C4	C9	U171A	E2	C9
P263	F2	D8	U171B	E2	C9
P264	D4	D8	U171C	A1	C9
P365	D2	F7	U171D	E3	C9
P373	C5	F9	U232	A2	D5
P470	D5	F9	U241	A3	D5
			U261A	G4	D7
Q520	B2	H3	U261B	F2	D7
Q521	B2	H3	U261C	G5	D7
			U262A	G2	D8
R11	D1	B3	U262B	G1	D8
R12	B1	B3	U262C	G2	D8
R53	B1	B6	U271A	D4	D8
R61	D1	B8	U271B	C4	D8
R131	D1	C4	U271C	D2	D8
R152	D1	C6	U271D	G2	D8
R155	G4	C7	U361A	E2	E7
R161	E1	C8	U361B	E2	E7
R255	F5	D7	U361C	E2	E7
R361	D1	F8	U361D	E2	E7
R365	F2	F8	U362A	B1	F7
R366	B1	F8	U362B	E2	F7
R472	F4	F9	U363B	E5	E7
R512	B2	H3	U363C	E4	E7
R513	B2	H3	U363D	E5	E7
R514	B2	H3	U364A	E5	F8
R515	B2	H3	U364B	E4	F8
R672	D2	J8	U371A	E4	E7
			U371B	D4	E7
TP10E	B2	A3	U371C	D4	E7
TP171	C4	C8	U371D	D4	E7
			U372A	E4	F9
U1C	A1	B2	U372B	D4	F9
U1D	A1	B2	U562	C2	H8


U012-7
7MHZ
U111-2
XFR
U001D
1/4 74S00
U012A
1/2 74S112
PR
CLR
J
CK
K
Q
NC
U021-13
14C
9, 10
U001C
1/4 74S00
R053
1K
+5V
WRITE
R012
39
P012
14C
PCM
P5
49
39
47
41

670-5694-00



1980

2921-127

MEMORY INTERFACE 8c

670-5694-01

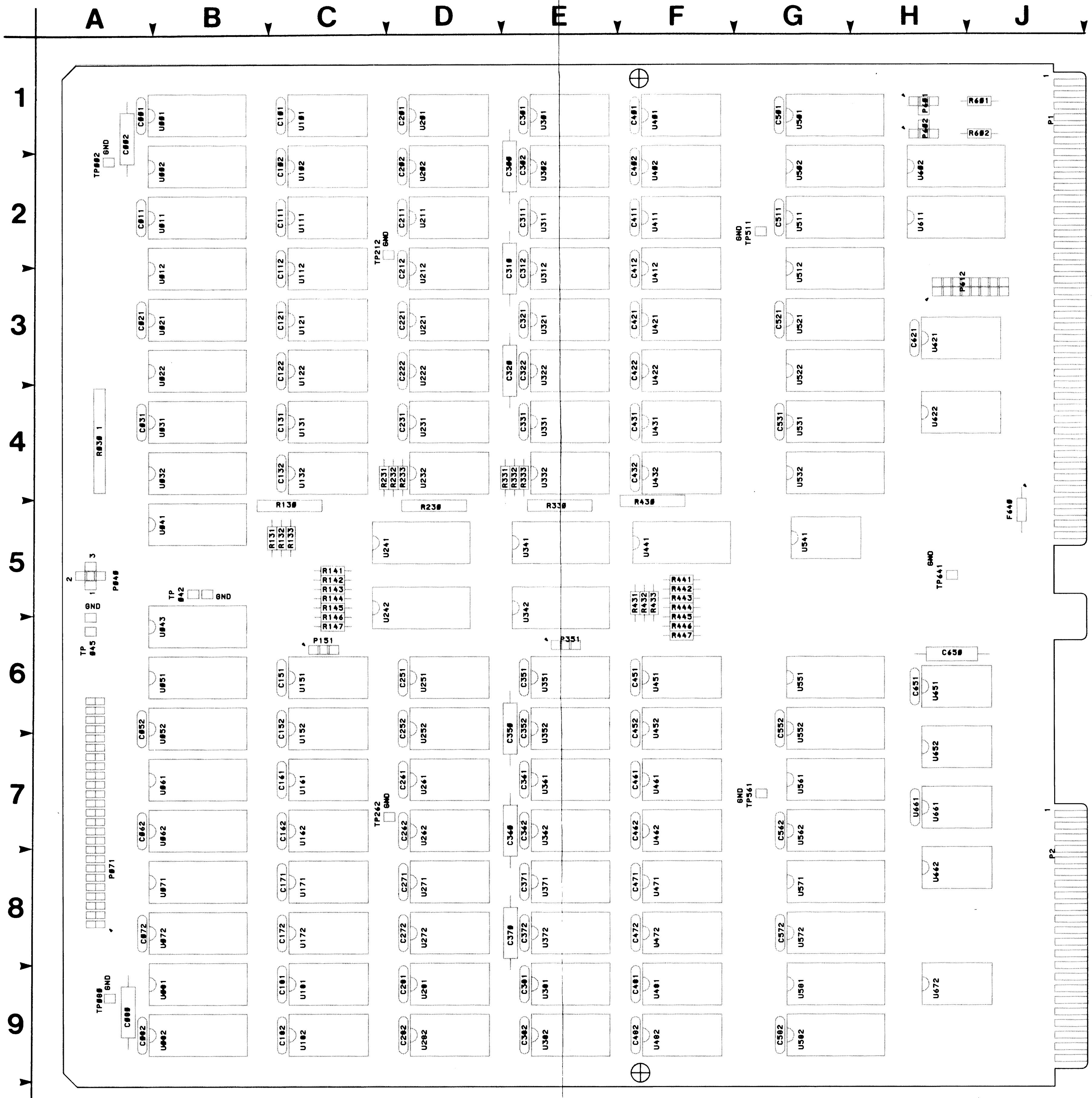


Fig. 10-14. A18—670-5692-01 Acquisition Memory board component locations.

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number
A23 A2 R1234
Assembly Number — Subassembly Number (if used) — Schematic Circuit Number

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

2921-63

ADDRESS DECODER DIAGRAM ⟨9⟩ a

ASSEMBLY A18 *Partial A18 also shown on diagrams 9b, 9c, 9d and 9e.*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	E2	A1
C2	E4	A1
C11	F2	A2
C21	F2	A3
C31	F2	A4
C52	F2	A7
C62	E2	A7
C72	F2	A8
C80	E4	A9
C82	F2	A9
C101	E3	C1
C102	F2	C2
C111	F3	C2
C112	E3	C3
C121	F3	C3
C122	F2	C3
C131	F3	C4
C132	F3	C4
C151	F3	C6
C152	E2	C7
C161	E3	C7
C162	F3	C8
C171	F3	C8
C172	F2	C8
C181	F3	C9
C182	F3	C9
C201	F2	D1
C202	F3	D2
C211	F3	D2
C212	F3	D2
C221	F2	D2
C222	E3	D2
C231	E3	D4
C251	F2	D6
C252	F3	D7
C261	F3	D7
C262	F3	D7
C271	E2	D8
C272	F3	D8
C281	F3	D9
C282	F3	D9
C300	F4	E2
C301	E3	E1
C302	F3	E2
C310	E4	E3
C311	F3	E2
C312	F2	E3
C320	F4	E3
C321	F3	E3
C322	F3	E3
C331	F3	E4
C350	E4	E7
C350	F4	E7
C351	F3	E6
C352	E3	E7
C360	E4	E8
C361	E3	E7
C362	F2	E8
C370	F4	E8
C371	F3	E8
C372	F3	E8
C381	F3	E9
C382	F2	E9
C401	F3	F1
C402	F3	F2
C411	F2	F2
C412	F3	F3
C421	F3	F3
C422	E3	F3
C431	E2	F4
C432	F3	F4
C451	F3	F6
C452	F3	F7
C461	F2	F7
C462	F3	F8
C471	E3	F8
C472	F3	F8
C481	F2	F9
C482	E3	F9
C501	F2	G1
C511	F2	G2
C521	E2	G3
C531	F2	G4
C552	F2	G7
C562	F2	G8
C572	E2	G8
C582	F2	G9
C621	F2	H3
C650	E4	H6
C651	F2	H6
C661	F2	H7
F640	H3	J5
P601	B1	H1
P602	B1	H1
P612	B2	J3
R130D	E1	C5
R130E	E1	C5
R130F	E1	C5
R131	E4	C5
R132	E3	C5
R133	E2	C5
R230B	E1	D5
R230D	E1	D5
R230E	E1	D5
R231	E4	D4
R232	E2	D4
R233	E3	D4
R330B	E1	E5
R330C	E1	E5
R330D	E1	E5
R331	E4	E4
R332	E2	E4
R333	E3	E4
R430B	F1	F5
R430C	F1	F5
R430D	F1	F5
R431	E5	F6
R432	E2	F6
R433	E3	F6
R601	B1	J1
R602	B1	J1
TP641	B1	H5
U241	D3	D5
U341	D4	E5
U441	D2	F5
U541A	C3	G5
U541B	C3	G5
U541C	C3	G5
U541D	C3	G5
U602	A1	H2
U611	C1	H2
U621	A2	H3
U622	B3	H4
U651A	B3	H6
U651B	B3	H6
U652A	B3	H7
U652B	B3	H7
U661A	B2	H7
U661B	B2	H7
U661C	B2	H7
U661D	B2	H7
U662A	C1	H8
U662B	C2	H8
U662C	C1	H8
U662D	B4	H8
U672A	D1	H9
U672B	D1	H9
U672C	D1	H9
U672D	D1	H9

REPLACEABLE MECHANICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

SPECIAL NOTES AND SYMBOLS

X000 Part first added at this serial number

00X Part removed after this serial number

FIGURE AND INDEX NUMBERS

Items in this section are referenced by figure and index numbers to the illustrations.

INDENTATION SYSTEM

This mechanical parts list is indented to indicate item relationships. Following is an example of the indentation system used in the description column.

1 2 3 4 5 Name & Description

Assembly and/or Component
Attaching parts for Assembly and/or Component
--- * ---
Detail Part of Assembly and/or Component
Attaching parts for Detail Part
--- * ---
Parts of Detail Part
Attaching parts for Parts of Detail Part
--- * ---

Attaching Parts always appear in the same indentation as the item it mounts, while the detail parts are indented to the right. Indented items are part of, and included with, the next higher indentation. The separation symbol --- * --- indicates the end of attaching parts.

Attaching parts must be purchased separately, unless otherwise specified.

ITEM NAME

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

ABBREVIATIONS

"	INCH
#	NUMBER SIZE
ACTR	ACTUATOR
ADPTR	ADAPTER
ALIGN	ALIGNMENT
AL	ALUMINUM
ASSEM	ASSEMBLED
ASSY	ASSEMBLY
ATTEN	ATTENUATOR
AWG	AMERICAN WIRE GAGE
BD	BOARD
BRKT	BRACKET
BRS	BRASS
BRZ	BRONZE
BSHG	BUSHING
CAB	CABINET
CAP	CAPACITOR
CER	CERAMIC
CHAS	CHASSIS
CKT	CIRCUIT
COMP	COMPOSITION
CONN	CONNECTOR
COV	COVER
CPLG	COUPLING
CRT	CATHODE RAY TUBE
DEG	DEGREE
DWR	DRAWER
ELCTRN	ELECTRON
ELEC	ELECTRICAL
ELCTLT	ELECTROLYTIC
ELEM	ELEMENT
EPL	ELECTRICAL PARTS LIST
EQPT	EQUIPMENT
EXT	EXTERNAL
FIL	FILLISTER HEAD
FLEX	FLEXIBLE
FLH	FLAT HEAD
FLTR	FILTER
FR	FRAME or FRONT
FSTNR	FASTENER
FT	FOOT
FXD	FIXED
GSKT	GASKET
HDL	HANDLE
HEX	HEXAGON
HEX HD	HEXAGONAL HEAD
HEX SOC	HEXAGONAL SOCKET
HLCPS	HELICAL COMPRESSION
HLEXT	HELICAL EXTENSION
HV	HIGH VOLTAGE
IC	INTEGRATED CIRCUIT
ID	INSIDE DIAMETER
IDENT	IDENTIFICATION
IMPLR	IMPELLER
IN	INCH
INCAND	INCANDESCENT
INSUL	INSULATOR
INTL	INTERNAL
LPHLDR	LAMPHOLDER
MACH	MACHINE
MECH	MECHANICAL
MTG	MOUNTING
NIP	NIPPLE
NON WIRE	NOT WIRE WOUND
OBD	ORDER BY DESCRIPTION
OD	OUTSIDE DIAMETER
OVH	OVAL HEAD
PH BRZ	PHOSPHOR BRONZE
PL	PLAIN or PLATE
PLSTC	PLASTIC
PN	PART NUMBER
PNH	PAN HEAD
PWR	POWER
RCPT	RECEPTACLE
RES	RESISTOR
RGD	RIGID
RLF	RELIEF
RTNR	RETAINER
SCH	SOCKET HEAD
SCOPE	OSCILLOSCOPE
SCR	SCREW
SE	SINGLE END
SECT	SECTION
SEMICOND	SEMICONDUCTOR
SHLD	SHIELD
SHLDR	SHOULDERED
SKT	SOCKET
SL	SLIDE
SLFLKG	SELF-LOCKING
SLVG	SLEEVING
SPR	SPRING
SQ	SQUARE
SST	STAINLESS STEEL
STL	STEEL
SW	SWITCH
T	TUBE
TERM	TERMINAL
THD	THREAD
THK	THICK
TNSN	TENSION
TPG	TAPPING
TRH	TRUSS HEAD
V	VOLTAGE
VAR	VARIABLE
W/	WITH
WSHR	WASHER
XFMR	TRANSFORMER
XSTR	TRANSISTOR

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
S3629	PANEL COMPONENTS CORP.	2015 SECOND ST	BERKELEY, CA 94170
000BK	STAUFFER SUPPLY	105 SE TAYLOR	PORTLAND, OR 97214
000JL	H SCHURTER AG DIST PANEL COMPONENTS	2015 SECOND STREET	BERKELEY, CA 94170
000KQ	POWELL AND ASSOCIATES	111 S. FINDLAY	SEATTLE, WA 98108
00779	AMP, INC.	P O BOX 3608	HARRISBURG, PA 17105
01295	TEXAS INSTRUMENTS, INC., SEMICONDUCTOR GROUP	P O BOX 5012, 13500 N CENTRAL EXPRESSWAY	DALLAS, TX 75222
05574	VIKING INDUSTRIES, INC.	21001 NORDHOFF STREET	CHATSWORTH CA 91311
05820	WAKEFIELD ENGINEERING, INC.	AUDUBON ROAD	WAKEFIELD, MA 01880
06666	GENERAL DEVICES CO., INC.	525 S WEBSTER AVE.	INDIANAPOLIS, IN 46219
06776	ROBINSON NUGENT INC.	800 E. 8TH ST., BOX 470	NEW ALBANY, IN 47150
07111	PNEUMO DYNAMICS CORPORATION	4800 PRUDENTIAL TOWER	BOSTON, MA 02199
08530	RELIANCE MICA CORP.	342-39TH ST.	BROOKLYN, NY 11232
09922	BURNDY CORPORATION	RICHARDS AVENUE	NORWALK, CT 06852
11897	PLASTIGLIDE MFG. CORPORATION	P O BOX 867, 1757 STANFORD ST.	SANTA MONICA, CA 90406
12327	FREEWAY CORPORATION	9301 ALLEN DRIVE	CLEVELAND, OH 44125
18722	RCA CORP. SOLID STATE DIVISION	CRESTWOOD ROAD	MOUNTAINTOP, PA 18707
20999	MINNESOTA MINING AND MFG CO., INDUSTRIAL ELECTRICAL PRODUCTS DIVISION	3M CENTER	ST. PAUL, MN 55101
22526	BERG ELECTRONICS, INC.	YOUK EXPRESSWAY	NEW CUMBERLAND, PA 17070
22599	ESNA, DIV. OF AMERACE CORPORATION	16150 STAGG STREET	VAN NUYS, CA 91409
24931	SPECIALITY CONNECTOR CO., INC.	2620 ENDRESS PLACE	GREENWOOD, IN 46142
26365	GRIES REPRODUCER CO., DIV. OF COATS AND CLARK, INC.	125 BEECHWOOD AVE.	NEW ROCHELLE, NY 10802
27264	MOLEX PRODUCTS CO.	5224 KATRINE AVE.	DOWNERS GROVE, IL 60515
32559	BIVAR, INC.	1617 E EDINGER AVE.	SANTA ANA, CA 92705
NO ENTRY	FOR 3259		
52905	SIMPLEX MFG. COMPANY	5224 NE 42ND AVENUE	PORTLAND, OREGON 97218
53894	AHAM, INC.	968 W FOOTHILL BLVD.	AZUSA, CA 91702
55285	BERGQUIST CO. INC.	5300 EDINA INDUSTRIAL BLVD	MINNEAPOLIS, MN 55435
70485	ATLANTIC INDIA RUBBER WORKS, INC.	571 W. POLK ST.	CHICAGO, IL 60607
71468	ITT CANNON ELECTRIC	666 E. DYER RD.	SANTA ANA, CA 92702
71785	TRW, CINCH CONNECTORS	1501 MORSE AVENUE	ELK GROVE VILLAGE, IL 60007
73743	FISCHER SPECIAL MFG. CO.	446 MORGAN ST.	CINCINNATI, OH 45206
73803	TEXAS INSTRUMENTS, INC., METALLURGICAL MATERIALS DIV.	34 FOREST STREET	ATTLEBORO, MA 02703
75037	MINNESOTA MINING & MFG CO ELECTRO PRODUCTS DIV.	3M CENTER	ST. PAUL, MN 55101
77250	PHEOLL MANUFACTURING CO., DIVISION OF ALLIED PRODUCTS CORP.	5700 W. ROOSEVELT RD.	CHICAGO, IL 60650
78189	ILLINOIS TOOL WORKS, INC. SHAKEPROOF DIVISION	ST. CHARLES ROAD	ELGIN, IL 60120
78584	STEWART STAMPING CORP.	630 CENTRAL PARK AVE.	YONKERS, NY 10704
79136	WALDES, KOHINOOR, INC.	47-16 AUSTEL PLACE	LONG ISLAND CITY NY 11101
80009	TEKTRONIX, INC.	P O BOX 500	BEAVERTON, OR 97077
81041	HOWARD INDUSTRIES, DIVISION OF MSL INDUSTRIES, INC.	P O BOX 287	MILFORD, IL 60953
81741	CHICAGO LOCK CO.	4311 W. BELMONT AVE.	CHICAGO, IL 60641
82877	ROTRON, INC.	7-9 HASBROUCK LANE	WOODSTOCK, NY 12498
83385	CENTRAL SCREW CO.	2530 CRESCENT DR.	BROADVIEW, IL 60153
86445	PENN FIBRE AND SPECIALTY CO., INC.	2032 E. WESTMORELAND ST.	PHILADELPHIA, PA 19134
86928	SEASTROM MFG. COMPANY, INC.	701 SONORA AVENUE	GLENDALE, CA 91201
87308	N. L. INDUSTRIES, INC., SOUTHERN SCREW DIV.	P. O. BOX 1360	STATESVILLE, NC 28677
91260	CONNOR SPRING AND MFG. CO.	1729 JUNCTION AVE.	SAN JOSE, CA 95112
91506	AUGAT, INC.	33 PERRY AVE.	ATTLEBORO, MA 02703
93907	TEXTRON INC. CAMCAR DIV	600 18TH AVE	ROCKFORD, IL 61101
95987	WECKESSER CO., INC.	4444 WEST IRVING PARK RD.	CHICAGO, IL 60641
96904	NATVAR CORP.	211 RANDOLPH AVE.	WOODBRIDGE, NJ 07095
98159	RUBBER TECK, INC.	19115 HAMILTON AVE., P O BOX 389	GARDENA, CA 90247
98291	SEALECTRO CORP.	225 HOYT	MAMARONECK, NY 10544

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
1-1	390-0711-00			1	CABINET,SLIDE:RIGHT	80009	390-0711-00
					(ATTACHING PARTS)		
-2	214-0603-00			8	PIN,SECURING:0.450 DIA X 0.270 LONG	26365	OBD
-3	386-0227-04			8	STOP.CLP,RIM CL:SIL GY DELRIN	80009	386-0227-04
-4	386-1151-00			8	CLAMP,RIM CLENC:SPG STL CD PL	80009	386-1151-00
					- - - * - - -		
-5	390-0712-00			1	CABINET,SLIDE:LEFT	80009	390-0712-00
					(ATTACHING PARTS)		
-6	214-0603-02			8	PIN ASSY,SECRG:	80009	214-0603-02
-7	386-0227-04			8	STOP,CLP,RIM CL:SIL GY DELRIN	80009	386-0227-04
-8	386-1151-00			8	CLAMP,RIM CLENC:SPG STL CD PL	80009	386-1151-00
					- - - * - - -		
-9	351-0104-03			1	SLIDE SECT,DWR:12.625 L,W/O HARDWARE	06666	C-720-3
					(ATTACHING PARTS)		
-10	212-0004-00			4	SCREW,MACHINE:8-32 X 0.312 INCH,PNH STL	83385	OBD
					- - - * - - -		
-11	390-0714-00			1	CABINET TOP:	80009	390-0714-00
					(ATTACHING PARTS)		
-12	214-0603-02			10	PIN ASSY,SECRG:	80009	214-0603-02
-13	386-0227-04			10	STOP,CLP,RIM CL:SIL GY DELRIN	80009	386-0227-04
-14	386-1151-00			10	CLAMP,RIM CLENC:SPG STL CD PL	80009	386-1151-00
					- - - * - - -		
-15	390-0713-00			1	CABINET BOTTOM:	80009	390-0713-00
					(ATTACHING PARTS)		
-16	214-0603-02			10	PIN ASSY,SECRG:	80009	214-0603-02
-17	386-0227-04			10	STOP,CLP,RIM CL:SIL GY DELRIN	80009	386-0227-04
-18	386-1151-00			10	CLAMP,RIM CLENC:SPG STL CD PL	80009	386-1151-00
					- - - * - - -		
-19	426-1632-02			2	FRAME SECT,CAB.:CORNER,TOP RIGHT & BOT LEFT	80009	426-1632-02
					(ATTACHING PARTS)		
-20	213-0760-00			4	SCREW,TPG,TF:8-32 X 0.875,SPCL TAPTITE	93907	OBD
-21	211-0510-00			4	SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-22	124-0360-01			2	STRIP,TRIM:CORNER,TOP,GRAY,19.4 L	80009	124-0360-01
-23	426-1632-01			2	FRAME SECT,CAB.:CORNER,TOP LEFT & BOT RIGHT	80009	426-1632-01
					(ATTACHING PARTS)		
-24	213 0760-00			4	SCREW,TPG,TF:8-32 X 0.875,SPCL TAPTITE	93907	OBD
	211-0510-00			4	SCREW,MACHINE:6-32 X 0.375,PNH,STL CD PL	83385	OBD
					- - - * - - -		
-25	124-0360-01			2	STRIP,TRIM:CORNER,TOP,GRAY,19.4 L	80009	124-0360-01
-26	426-1568-00			1	FRAME SECT,CAB.:INNER	80009	426-1568-00
					(ATTACHING PARTS)		
-27	213-0760-00			4	SCREW,TPG,TF:8-32 X 0.875,SPCL TAPTITE	93907	OBD
					- - - * - - -		
-28	333-2567-00			1	PANEL.FRONT:1980	80009	333 2567-00
-29	334-3695-00			1	MARKER,IDENT:MKD,BOARD NAME(INSIDE DOOR)	80009	334-3695-00
-30	386-4324-00			1	SUPPORT,DOOR:ALUMINUM	80009	386-4324-00
					(ATTACHING PARTS)		
-31	210-0458-00			4	NUT,PL,ASSEM WA:8-32 X 0.344 INCH,STL	83385	OBD
					- - - * - - -		
-32	105-0849-00			1	LOCK,FLUSH:	81741	3174 STYLEAR
-33	105-0848-00			1	LATCH,DOOR:ALUMINUM	91260	OBD
					(ATTACHING PARTS)		
-34	210-0458-00			2	NUT,PL,ASSEM WA:8-32 X 0.344 INCH,STL	83385	OBD
					- - - * - - -		
-35	333-2566-00			1	PANEL,FRONT:1980	80009	333-2566-00
-36	260-1963-00			1	SWITCH,LOCK:DBL POLE,TRPLTHROW,200MA	80009	260-1963-00
-37	----- -----			1	SWITCH,PUSH:(SEE S101 REPL)		
-38	----- -----			1	SWITCH,ROCKER:(SEE S100 REPL)		
	175-2698-00			1	CA ASSY,SP,ELEC:5,22 AWG,5.0 L	80009	175-2698-00
	----- -----			-	(A40P04 GOES TO S101 & S102)		
	175-2398-00			1	CA ASSY,SP,ELEC:3,22 AWG,4.0 L	80009	175-2398-00
	----- ----			-	(A40P01 GOES TO S100 & DS100)		
	175-2397-00			1	CA ASSY,SP,ELEC:5,22 AWG,16.0 L	80009	175-2397-00
	----- -----			-	(A10P01 GOES TO A40P02)		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
1-39	386-4200-00			1	SUBPANEL,FRONT:	80009	386-4200-00
					(ATTACHING PARTS)		
-40	213-0123-00			4	SCREW,TPG,TF:6-32 X 0.375,SPCL TYPE,FLH	93907	OBD
-41	210-0586-00			2	NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
					- - - * - - -		
-42	----- -----			1	CKT BOARD ASSY:FRONT PANEL(SEE A40 REPL)		
					(ATTACHING PARTS)		
-43	211-0008-00			3	SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
	----- -----			-	CKT BOARD ASSY INCLUDES:		
-44	131-0589-00			21	. TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
-45	426-1556-01			1	FRAME,CABINET:OPEN FRONT	80009	426-1556-01
-46	361-1023-00			1	SPCR,DOOR LOCK:0.5 X 1.875 L X 0.3 W,AL	80009	361-1023-00
					(ATTACHING PARTS)		
-47	211-0038-00			2	SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG	83385	OBD
					- - - * - - -		
-48	426-1556-02			1	FRAME,CABINET:OPEN REAR	80009	426-1556-02

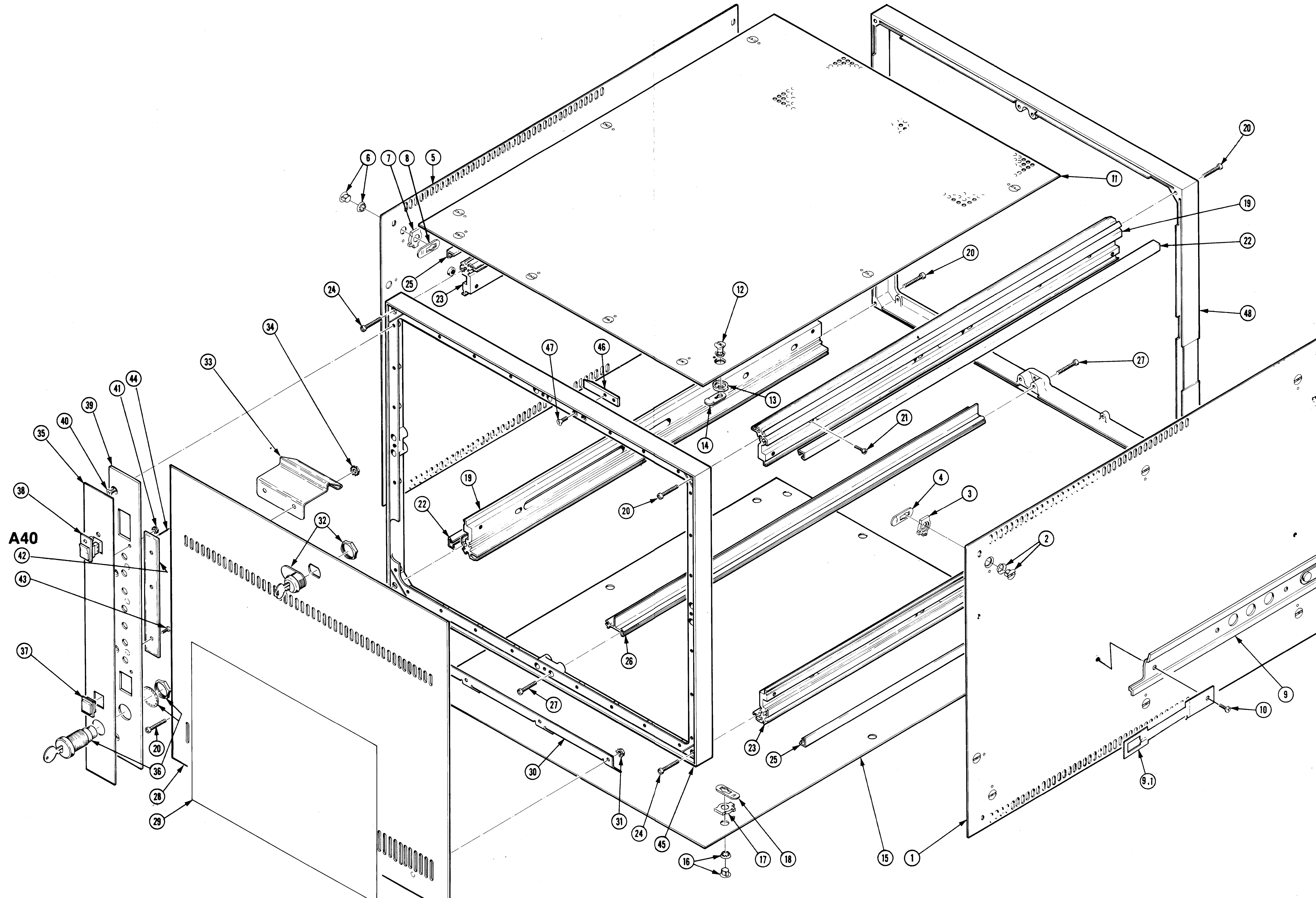


FIG. 1 CABINET

FIG. 2 CIRCUIT BOARD & MAIN CHASSIS

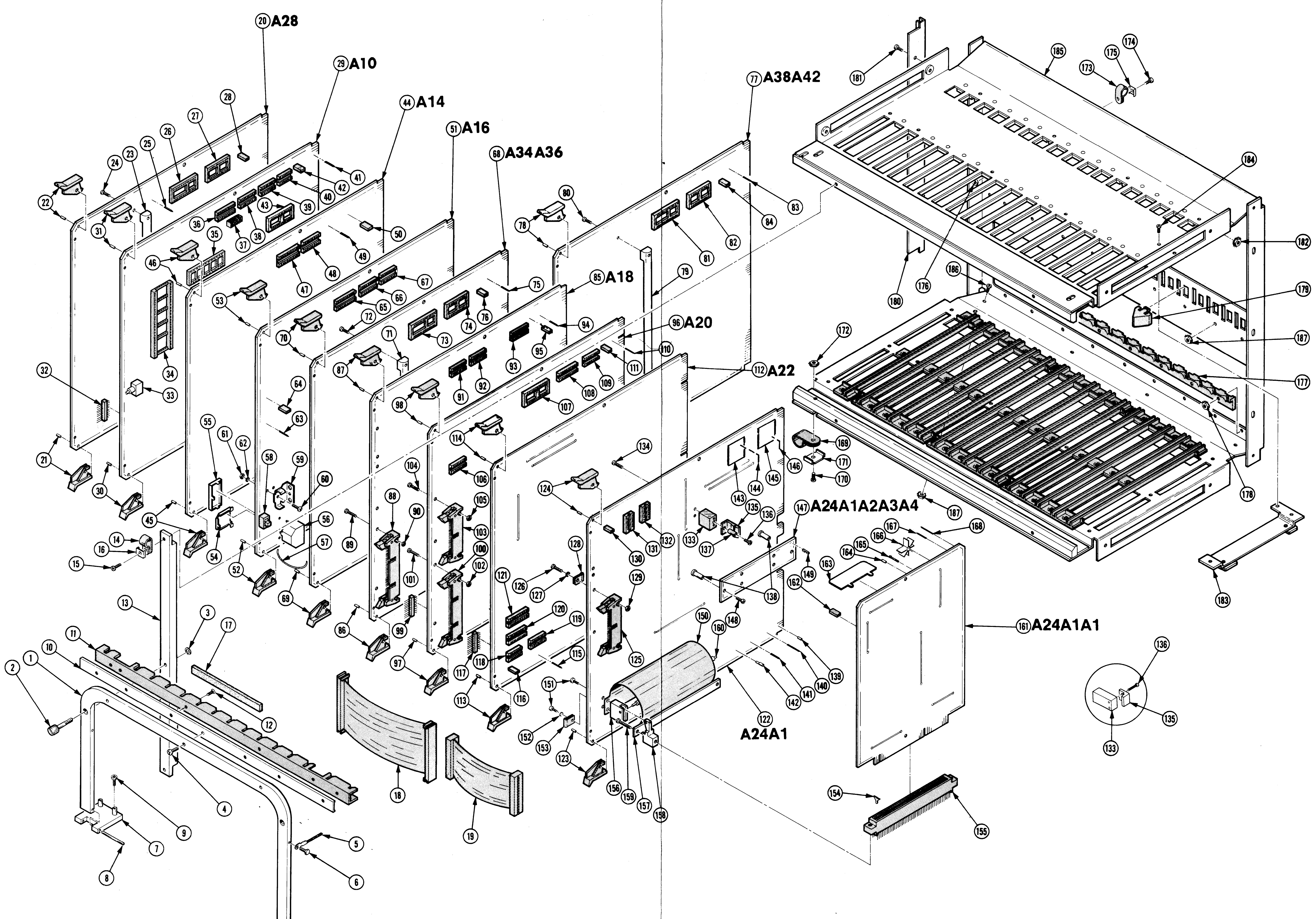


Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
2-1	367-0292-00			1	HANDLE,BOW:10.725 L,ALUMINUM	80009	367-0292-00
					(ATTACHING PARTS)		
-2	213-0854-00			2	THUMBSCREW:6-32 X 0.25,0.375 OD,SST,SL	80009	213-0854-00
-3	354-0163-00			2	RING,RETAINING:TRUARC,CAD PLATE	79136	5133-12MD
-4	211-0510-00			3	SCREW,MACHINE:6-32 X 0.375,PNH,STL CD PL	83385	OBD
					- - - * - -		
-5	214-3173-00			2	WIRE ROPE ASSY:5.75 L	80009	214-3173-00
					(ATTACHING PARTS)		
-6	211-0296-00			4	SCREW,SHOULDER:4-40 X 0.25,HEX HD,STL CU-S	80009	211-0296-00
					- - - * - - -		
-7	214-3080-00			2	HINGE HALF:LOWER CKT BD RETAINER,AL	80009	214-3080-00
					(ATTACHING PARTS)		
-8	214-1534-00			2	PIN,RETAINING:1.25 L X 0.103 OD,CS BLACK	22599	59-022-094-1250
-9	211-0510-00			4	SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-10	343-0830-00			1	RETAINER,CKT BD:14.125 L X 0.5 W,AL	80009	343-0830-00
-11	343-0825-00			1	RETAINER,CKT BD:POLYCARBONATE	80009	343-0825-00
					(ATTACHING PARTS)		
-12	211-0105-00			4	SCREW,MACHINE:4-40 X 0.188,100 DEG,FLH STL	83385	OBD
					- - - * - - -		
-13	407-2367-00			2	BRACKET,SUPPORT:CIRCUIT BOARD,AL	80009	407-2367-00
-14	343-0005-00			1	CLAMP,LOOP:0.438 INCH	95987	7-16-6B
					(ATTACHING PARTS)		
-15	211-0510-00			1	SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
-16	210-0863-00			1	WSHR,LOOP CLAMP:0.187 ID U/W 0.5 W CLP,STL	95987	C191
					- - - * - -		
-17	348-0645-00			AR	PAD,CUSHIONING:0.975 X 0.3	80009	348-0645-00
	348-0646-00			AR	PAD,CUSHIONING:1.6 X 0.3	80009	348-0646-00
	348-0647-00			AR	PAD,CUSHIONING:9.9 X 0.3	80009	348-0647-00
-18	175-2442-00			1	CA ASSY,SP,ELEC:50,28 AWG,3.0 L	22526	OBD
	----- -----			-	(A20P05 GOES TO A18P71)		
-19	175-2443-00			1	CA ASSY,SP,ELEC:34,28 AWG,5.5 L	22526	OBD
	----- -----			-	(A24P40 GOES TO A20P03)		
-20	----- -----			1	CKT BOARD ASSY:60K WORD ROM/PROM(SEE A28 REPL)		
-21	105-0815-05			1	. EJECTOR,CKT BD:MKD ROM,PLSTC	80009	105-0815-05
-22	105-0815-00			1	. EJECTOR,CKT BD:PLASTIC	32559	LP-06
-23	386-4269-00			1	. STIF,CIRCUIT BD:9.5 L,ALUMINUM	80009	386-4269-00
					(ATTACHING PARTS)		
-24	211-0510-00			4	. SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-25	131-0608-00			183	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-26	136-0755-00			4	. SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	09922	DILB28P-108
-27	136-0751-00			32	. SKT,PL-IN ELEK:MICROCKT,24 PIN	09922	DILB24P108
-28	131-0993-00			65	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-29	----- -----			1	CKT BOARD ASSY:CPU(SEE A10 REPL)		
-30	105-0815-03			1	. EJECTOR,CKT BD:MKD CPU,PLSTC	80009	105-0815-03
-31	105-0815-00			1	. EJECTOR,CKT BD:PLASTIC	32559	LP-06
-32	131-1425-00			1	. CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
-33	----- -----			2	. SWITCH,PUSH:(SEE S010,S050 REPL)		
-34	136-0716-00			1	. SKT,PL-IN ELEK:MICROCKT,64 CONT	06776	ICN649-S5-G30
-35	136-0757-00			1	. SKT,PL-IN ELEK:MICROCKT,40 PIN	09922	DILB40P-108
-36	136-0752-00			2	. SKT,PL-IN ELEK:MICROCIRCUIT,20 DIP	09922	DILB20P-108
-37	214-2868-00			1	. HEAT SINK,XSTR:TO-116,ALUMINUM	53894	144
-38	136-0756-00			10	. SKT,PL-IN ELEK:MICROCIRCUIT,18 DIP	09922	DILB18P-108
-39	136-0729-00			2	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-40	136-0728-00			1	. SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-41	131-0608-00			63	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-42	131-0993-00			5	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-43	136-0751-00			2	. SKT,PL-IN ELEK:MICROCKT,24 PIN	09922	DILB24P108
-44	----- -----			1	CKT BOARD ASSY:DYNAMIC RAM(SEE A14 REPL)		
-45	105-0815-04			1	. EJECTOR,CKT BD:MKD RAM,PLASTIC	80009	105-0815-04
-46	105-0815-00			1	. EJECTOR,CKT BD:PLASTIC	32559	LP-06
-47	136-0752-00			2	. SKT,PL-IN ELEK:MICROCIRCUIT,20 DIP	09922	DILB20P-108
-48	136-0729-00			32	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-49	131-0608-00			17	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-50	131-0993-00			1	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
2-51	----- -----			1	CKT BOARD ASSY:NON VOLATILE MEMORY/RT CLK		
	----- -----			-	(SEE A16 REPL)		
-52	105-0815-01			1	. EJECTOR.CKT BD:MKD NVM,PLASTIC	80009	105-0815-01
-53	105-0815-00			1	. EJECTOR,CKT BD:PLLSTIC	32559	LP-06
-54	337-2689-00			1	. SHIELD,ELEC:BOTTOM,BATTERY	80009	337-2689-00
-55	337-2687-00			1	. SHIELD,ELEC:SWITCH	80009	337-2687-00
-56	337-2688-00			2	. SHIELD,ELEC:TOP BATTERY	80009	337-2688-00
-57	346-0032-00			4	. STRAP,RETAINING:0.075 DIA X 4.0 L,MLD RBR	98159	2859-75-4
-58	----- -----			2	. SWITCH.PUSH:(SEE A16S081,A16S087 REPL)		
-59	136-0153-00			1	. SKT,PL-IN,ELEK:CRYSTAL,2 CONT,W/CLAMP	91506	8000AG6
					(ATTACHING PARTS)		
-60	211-0001-00			2	. SCREW,MACHINE:2-56 X 0.25 INCH,PNH STL	87308	OBD
-61	210-0405-00			2	. NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS	73743	12157-50
-62	210-0001-00			2	. WASHER,LOCK:INTL,0.092 ID X 0.18"OD,STL	78189	1202-00-00-0541C
					- - - * - - -		
-63	131-0608-00			34	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-64	131-0993-00			6	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-65	136-0756-00			32	. SKT,PL-IN ELEK:MICROCIRCUIT,18 DIP	09922	DILB18P-108
-66	136-0729-00			13	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-67	136-0728-00			9	. SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-68	----- -----			1	CKT BOARD ASSY:ROM/PROM APPLICATIONS NTSC		
	----- -----			-	(SEE A34,A36 REPL)		
-69	105-0815-05			1	. EJECTOR,CKT BD:MKD ROM,PLSLTC	80009	105-0815-05
-70	105-0815-00			1	. EJECTOR,CKT BD:PLASTIC	32559	LP-06
-71	386-4269-00			1	. STIF,CIRCUIT BD:9.5 L,ALUMINUM	80009	386-469-00
					(ATTACHING PARTS)		
-72	211-0510-00			4	. SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-73	136-0755-00			4	. SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	09922	DILB28P-108
-74	136-0751-00			32	. SKT,PL-IN ELEK:MICROCKT,24 PIN	09922	DILB24P108
-75	131-0608-00			183	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-76	131-0993-00			65	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-77	----- -----			1	CKT BOARD ASSY:ROM/PROM APPLICATIONS NTSC V.1,B		
	----- -----			-	(SEE A38,A42 REPL)		
-78	105-0815-00			1	. EJECTOR,CKT BOARD:PLASTIC	32559	LP-06
	105-0815-05			1	. EJECTOR,CKT BOARD:MKD ROM,PLASTIC	80009	105-0815-05
-79	386-4269-00			1	. STIF,CIRCUIT BD:9.5 ALMINUM	80009	386-4269-00
					(ATTACHING PARTS)		
-80	211-0510-00			4	. SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-81	136-0755-00			4	. SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	09922	DILB28P-108
-82	136-0751-00			32	. SKT,PL-IN ELEK:MICROCKT,24 PIN	09922	DILB24P108
-83	131-0608-00			183	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-84	131-0993-00			65	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-85	----- -----			1	CKT BOARD ASSY:VIDEO ACQUISTION MEMORY		
	----- -----			-	(SEE A18 REPL)		
-86	105-0815-08			1	. EJECTOR,CKT BD:MKD AM,PLSTC	80009	105-0815-08
-87	105-0815-00			1	. EJECTOR,CKT BD:PLASTIC	3259	LP-06
-88	131-2405-00			1	. CONN,RCPT,ELEC:CKT BD,2 X 25MALE	75037	3433-1202
					(ATTACHING PARTS)		
-89	211-0159-00			2	. SCREW,MACHINE:2-56 X 0.375 INCH,PNH STL	87308	OBD
-90	210-0405-00			2	. NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS	73743	12157-50
					- - - * - - -		
-91	136-0756-00			8	. SKT,PL-IN ELEK:MICROCIRCUIT,18 DIP	09922	DILB18P-108
-92	136-0729-00			64	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-93	136-0752-00			16	. SKT,PL-IN ELEK:MICROCIRCUIT,20 DIP	09922	DILB20P-108
-94	131-0608-00			24	. TERMINAL.PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-95	131-0993-00			3	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-96	----- -----			1	CKT BOARD ASSY:VIDEO ACQ MEMORY CONTROLLER		
	----- -----			-	(SEE A20 REPL)		
-97	105-0815-09			1	. EJECTOR.CKT BD:MKD MC,PLSTC	80009	105-0815-09
-98	105-0815-00			1	. EJECTOR,CKT BD:PLASTIC	32559	LP-06
-99	131-1425-00			SET	. CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
-100	131-1465-00			1	. CONNECTOR,RCPT,:34 RT ANGEL CONT	20999	3431-1002
					(ATTACHING PARTS)		
-101	211-0159-00			2	. SCREW,MACHINE:2-56 X 0.375 INCH,PNH STL	87308	OBD
-102	210-0405-00			2	. NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS	73743	12157-50
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
2-103	131-1465-01			1	. CONN,RCPT,ELEC:CKT BD,34 CONTACT W/EJECTOR	75037	3431-1202
					(ATTACHING PARTS)		
-104	211-0159-00			2	. SCREW,MACHINE:2-56 X 0.375 INCH,PNH STL	87308	OBD
-105	210-0405-00			2	. NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS	73743	12157-50
					- - - * - - -		
-106	136-0728-00			1	. SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-107	136-0755-00			1	. SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	09922	DILB28P-108
-108	136-0752-00			4	. SKT,PL-IN ELEK:MICROCIRCUIT,20 DIP	09922	DILB20P-108
-109	136-0729-00			17	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-110	131-0608-00			53	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-111	131-0993-00			14	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-112	----- -----			1	CKT BOARD ASSY:DIGITAL FEEDBACK(SEE A22 REPL)		
-113	105-0815-02			1	. EJECTOR,CKT BD:MKD DFB,PLASTIC	80009	105-0815-02
-114	105-0815-02			1	. EJECTOR,CKT BD:PLASTIC	32559	LP-06
-115	131-0608-00			18	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-116	131-0993-00			6	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-117	131-1425-00			SET	. CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
-118	136-0728-00			6	. SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-119	136-0729-00			1	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-120	136-0752-00			12	. SKT,PL-IN ELEK:MICROCIRCUIT,20 DIP	09922	DILB20P-108
-121	136-0754-00			8	. SKT,PL-IN ELEK:MICROCIRCUIT,22 DIP	09922	DILB22P-108
	----- -----			1	CKT BOARD ASSY:VIDEO DATA CONVERTER-A/D ASSY		
	----- -----			-	(SEE A24 REPL)		
-122	----- -----			1	. CKT BOARD ASSY:VIDEO DATA CONVERTER		
	----- -----			-	. (SEE A24A1 REPL)		
-123	105-0815-10			1	. . EJECTOR,CKT BOARD:MKD VDC,PLASTIC	80009	105-0815-10
-124	105-0815-00			1	. . EJECTOR,CKT BOARD:	32559	LP-06
-125	131-1465-01			1	. . CONN,RCPT,ELEC:CKT BD,34 CONTACT W/EJECTOR	75037	3431-1202
					(ATTACHING PARTS)		
-126	211-0185-00			2	. . SCREW,MACHINE:2-56 X 0.438",PNH,STL	07111	OBD
-127	210-0001-00			2	. . WASHER,LOCK:INTL,0.092 ID X 0.18"OD,STL	78189	1202-00-00-0541C
-128	343-0119-00			2	. . CLAMP,LOOP:0.094 INCH DIA	95987	3/32-2
-129	210 0405-00			2	. . NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS	73743	12157-50
					- - - * - - -		
-130	131-0993-00			2	. . BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-131	136-0729-00			19	. . SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-132	136-0728-00			7	. . SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-133	391-0161-00			2	. . BLACK,SUPPORT:CIRCUIT BOARD,DELRIN	80009	391-0161-00
	----- -----			-	. . (670-5695-00,670-5695-01)		
	391-0161-02			2	. . BLOCK SUPPORT:CIRCUIT BOARD,DELRIN	80009	391-0161-02
	----- -----			-	. . (670-5695-02)		
					(ATTACHING PARTS)		
-134	211-0062-00			4	. . SCREW,MACHINE:2-56 X 0.312,PNH,STL	83385	OBD
					- - - * - - -		
-135	344-0131-00			2	. . CLIP,SPG TENS:CIRCUIT CARD MOUNTING	80009	344-0131-00
	----- -----			-	. . (670-5695-00,670-5695-01)		
	343-1107-00			2	. . RETAINER,CKT BOARD:ACETAL	80009	343-1107-00
	----- -----			-	. . (670-5695-02)		
					(ATTACHING PARTS)		
-136	211-0061-00			2	. . SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
-137	361-1080-00			2	. . SPACER,SLEEVE:0.375 L X 0.136,NYLON	80009	361-1080-00
	----- -----			-	. . (670-5695-00,670-5695-01)		
					- - - * - - -		
-138	129-0760-00			6	. . SPACER,POST:0.475 L,W/4-40 THRU THD	80009	129-0760-00
-139	136-0252-07			78	. . SOCKET,PIN CONN:W/O DIMPLE	22526	75060-012
-140	131-0591-00			12	. . CONTACT,ELEC:0.835 INCH LONG	22526	47352
-141	131-0608-00			69	. . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-142	131-0753-00			48	. . CONN,PLUG,ELEC:SNAP-ON FEMALE	98291	051-128-0000-220
-143	----- -----			1	. CKT BOARD ASSY:TEMP C-N BOARD		
	----- -----			-	. (SEE A24A1A5 REPL)		
-144	131-0608-00			4	. . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-145	----- -----			1	. CKT BOARD ASSY:TEMP C-P BOARD		
	----- -----			-	. (SEE A24A1A6 REPL)		
-146	131-0608-00			4	. . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-147	----- -----	B010100	B029999	1	. CKT BOARD ASSY:FILTER (SEE A24A2 REPL)		
					(ATTACHING PARTS)		
-148	211-0008-00			2	. SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
	----- -----			-	. (670-5956-00)		
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
2-	----- -----			-	. CKT BOARD ASSY INCLUDES:		
-149	136-0263-04			4	. . SOCKET,PIN TERM:FOR 0.025 INCH SQUARE PIN	22526	75377-001
	----- -----			-	. . (670-5956-00)		
	----- -----	B030000		1	. CKT BOARD ASSY:IRE FILEL(SEE A24A1A2 REPL)		
					(ATTACHING PARTS)		
	211-0008-00			2	. SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
	----- -----			-	. CKT BOARD ASSY INCLUDES:		
	136-0263-04			4	. . SOCKET,PIN TERM:FOR 0.025 INCH SQUARE PIN	22526	75377-001
	----- -----			1	. CKT BOARD ASSY:FILER(SEE A24A1A3 REPL)		
					(ATTACHING PARTS)		
	211-0008-00			2	. SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
	----- -----			-	. CKT BOARD ASSY INCLUDES:		
	136-0263-04			4	. . SOCKET,PIN TERM:FOR 0.025 INCH SQUARE PIN	22526	75377-001
	----- -----	B010100	B029999	1	. CKT BOARD ASSY:FILTER(SEE A24A1A4 REPL)		
					(ATTACHING PARTS)		
	211-0008-00			2	. SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
	----- -----			-	. (670-5956-00)		
					- - - * - - -		
	----- -----			-	. CKT BOARD ASSY INCLUDES:		
	136-0263-04			4	. . SOCKET,PIN TERM:FOR 0.025 INCH SQUARE PIN	22526	75377-001
	----- -----			-	. . (670-5956-00)		
	----- -----	B030000		1	. CKT BOARD ASSY:PAL L.F. ERROR FILTER		
	----- -----			-	. (SEE A24A1A4 REPL)		
					(ATTACHING PARTS)		
	211-0008-00			2	. SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
	----- -----			-	. CKT BOARD ASSY INCLUDES:		
	136-0263-04			5	. . SOCKET,PIN TERM:FOR 0.025 INCH SQUARE PIN	22526	75377-001
-150	----- -----			1	. VIDEO DATA INTERCONNECT:		
	----- -----			-	. (REPLACEABLE AS A UNIT WITH A24A1)		
					(ATTACHING PARTS)		
-151	211-0008-00			4	. SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
-152	210-0004-00			2	. WASHER,LOCK:#4 INTL,0.015THK,STL CD PL	000BK	OBD
-153	343-0119-00			2	. CLAMP,LOOP:0.094 INCH DIA	95987	3/32-2
					- - - * - - -		
	----- -----			-	. CKT BOARD ASSY INCLUDES:		
-154	214-1458-00			2	. . KEY,CONN PLZN:CKT BOARD	05574	091-0071-000
-155	131-0626-00			1	. . CONN,RCPT,ELEC:CKT BOARD,40/80 CONTACT	80009	131-0626-00
-156	214-2938-00			2	. . HING HALF:LOWER,ALUMINUM	80009	214-2938-00
-157	361-1025-00			1	. . SPACER,CKT BD:0.062 THK X 4.85 L X 0.35 W	80009	361-1025-00
-158	214-2937-00			2	. . HING HALF:UPPER,ALUMINUM	80009	214-2937-00
					(ATTACHING PARTS)		
-159	211-0017-00			2	. . SCREW,MACHINE:4-40 X 0.375 INCH,PNH STL	83385	OBD
					- - - * - - -		
-160	214-2939-00			1	. . PIN,HINGE:0.156 DIA X 4.83 L,SST	80009	214-2939-00
-161	----- -----			1	. CKT BOARD ASSY:A/D CONVERTER(SEE A24A1A1)		
-162	131-0993-00			1	. . BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-163	337-0763-00			1	. . SHLD,ELECTRICAL:B SWEEP CKT BD	80009	337-0763-00
-164	136-0252-07			64	. . SOCKET,PIN CONN:W/O DIMPLE	22526	75060-012
-165	214-0579-00			4	. . TERM,TEST POINT:BRS CD PL	80009	214-0579-00
-166	214-1292-00			1	. . HEAT SINK,ELEC:TRANSISTOR	05820	205SB
-167	131-0608-00			3	. . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-168	131-0787-00			9	. . CONTACT,ELEC:0.64 INCH LONG	22526	47359
-169	343-0005-00			2	CLAMP,LOOP:0.438 INCH	95987	7-16-6B
					(ATTACHING PARTS)		
-170	211-0510-00			2	SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
-171	210-0863-00			2	WSHR,LOOP CLAMP:0.187 ID U/W 0.5 W CLP,STL	95987	C191
-172	210-0457-00			2	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
					- - - * - - -		
-173	343-0002-00			1	CLAMP,LOOP:0.188 INCH DIA	95987	3-16-6B
					(ATTACHING PARTS)		
-174	211-0504-00			1	SCREW,MACHINE:6-32 X 0.25 INCH,PNH STL	83385	OBD
-175	210-0863-00			1	WSHR,LOOP CLAMP:0.187 ID U/W 0.5 W CLP,STL	95987	C191
-176	210-0457-00			1	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
2-103	131-1465-01			1	. CONN,RCPT,ELEC:CKT BD,34 CONTACT W/EJECTOR	75037	3431-1202
					(ATTACHING PARTS)		
-104	211-0159-00			2	. SCREW,MACHINE:2-56 X 0.375 INCH,PNH STL	87308	OBD
-105	210-0405-00			2	. NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS	73743	12157-50
					- - - * - - -		
-106	136-0728-00			1	. SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-107	136-0755-00			1	. SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	09922	DILB28P-108
-108	136-0752-00			4	. SKT,PL-IN ELEK:MICROCIRCUIT,20 DIP	09922	DILB20P-108
-109	136-0729-00			17	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-110	131-0608-00			53	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-111	131-0993-00			14	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-112	----- -----			1	CKT BOARD ASSY:DIGITAL FEEDBACK(SEE A22 REPL)		
-113	105-0815-02			1	. EJECTOR,CKT BD:MKD DFB,PLASTIC	80009	105-0815-02
-114	105-0815-02			1	. EJECTOR,CKT BD:PLASTIC	32559	LP-06
-115	131-0608-00			18	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-116	131-0993-00			6	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-117	131-1425-00			SET	. CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
-118	136-0728-00			6	. SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-119	136-0729-00			1	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-120	136-0752-00			12	. SKT,PL-IN ELEK:MICROCIRCUIT,20 DIP	09922	DILB20P-108
-121	136-0754-00			8	. SKT,PL-IN ELEK:MICROCIRCUIT,22 DIP	09922	DILB22P-108
	----- -----			1	CKT BOARD ASSY:VIDEO DATA CONVERTER-A/D ASSY		
	----- -----			-	(SEE A24 REPL)		
-122	----- -----			1	. CKT BOARD ASSY:VIDEO DATA CONVERTER		
	----- -----			-	. (SEE A24A1 REPL)		
-123	105-0815-10			1	. . EJECTOR,CKT BOARD:MKD VDC,PLASTIC	80009	105-0815-10
-124	105-0815-00			1	. . EJECTOR,CKT BOARD:	32559	LP-06
-125	131-1465-01			1	. . CONN,RCPT,ELEC:CKT BD,34 CONTACT W/EJECTOR	75037	3431-1202
					(ATTACHING PARTS)		
-126	211-0185-00			2	. . SCREW,MACHINE:2-56 X 0.438",PNH,STL	07111	OBD
-127	210-0001-00			2	. . WASHER,LOCK:INTL,0.092 ID X 0.18"OD,STL	78189	1202-00-00-0541C
-128	343-0119-00			2	. . CLAMP,LOOP:0.094 INCH DIA	95987	3/32-2
-129	210 0405-00			2	. . NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS	73743	12157-50
					- - - * - - -		
-130	131-0993-00			2	. . BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-131	136-0729-00			19	. . SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-132	136-0728-00			7	. . SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-133	391-0161-00			2	. . BLACK,SUPPORT:CIRCUIT BOARD,DELRIN	80009	391-0161-00
	----- -----			-	. . (670-5695-00,670-5695-01)		
	391-0161-02			2	. . BLOCK SUPPORT:CIRCUIT BOARD,DELRIN	80009	391-0161-02
	----- -----			-	. . (670-5695-02)		
					(ATTACHING PARTS)		
-134	211-0062-00			4	. . SCREW,MACHINE:2-56 X 0.312,PNH,STL	83385	OBD
					- - - * - - -		
-135	344-0131-00			2	. . CLIP,SPG TENS:CIRCUIT CARD MOUNTING	80009	344-0131-00
	----- -----			-	. . (670-5695-00,670-5695-01)		
	343-1107-00			2	. . RETAINER,CKT BOARD:ACETAL	80009	343-1107-00
	----- -----			-	. . (670-5695-02)		
					(ATTACHING PARTS)		
-136	211-0061-00			2	. . SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
-137	361-1080-00			2	. . SPACER,SLEEVE:0.375 L X 0.136,NYLON	80009	361-1080-00
	----- -----			-	. . (670-5695-00,670-5695-01)		
					- - - * - - -		
-138	129-0760-00			6	. . SPACER,POST:0.475 L,W/4-40 THRU THD	80009	129-0760-00
-139	136-0252-07			78	. . SOCKET,PIN CONN:W/O DIMPLE	22526	75060-012
-140	131-0591-00			12	. . CONTACT,ELEC:0.835 INCH LONG	22526	47352
-141	131-0608-00			69	. . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-142	131-0753-00			48	. . CONN,PLUG,ELEC:SNAP-ON FEMALE	98291	051-128-0000-220
-143	----- -----			1	. CKT BOARD ASSY:TEMP C-N BOARD		
	----- -----			-	. (SEE A24A1A5 REPL)		
-144	131-0608-00			4	. . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-145	----- -----			1	. CKT BOARD ASSY:TEMP C-P BOARD		
	----- -----			-	. (SEE A24A1A6 REPL)		
-146	131-0608-00			4	. . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-147	----- -----	B010100	B029999	1	. CKT BOARD ASSY:FILTER (SEE A24A2 REPL)		
					(ATTACHING PARTS)		
-148	211-0008-00			2	. SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
	----- -----			-	. (670-5956-00)		
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
2-177	351-0620-00			2	GUIDE,CKT BOARD:TOP & BOTTOM,PLASTIC	80009	351-0620-00
					(ATTACHING PARTS)		
-178	210-0457-00			12	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
					- - - * - - -		
-179	351-0602-00			17	GUIDE,CKT BOARD:MAIN CHASSIS,POLYAMIDE	80009	351-0602-00
-180	407-2405-00			1	BRACKET,CKT BOARD:W/GUIDE,ALUMINUM	80009	407-2405-00
					(ATTACHING PARTS)		
-181	211-0504-00			3	SCREW,MACHINE:6-32 X 0.25 INCH,PNH STL	83385	OBD
-182	210-0457-00			3	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
					- - - * - - -		
-183	407-2356-01	M 51513		1	BRACKET,CKT BOARD:W/GUIDE,ALUMINUM	80009	407-2356-01
					(ATTACHING PARTS)		
-184	211-0008-00			3	SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-185	441-1479-01			1	CHASSIS,MAIN:W/BRACKET & GUIDE	80009	441-1479-01
					(ATTACHING PARTS)		
-186	211-0504-00			4	SCREW,MACHINE:6-32 X 0.25 INCH,PNH STL	83385	OBD
-187	210-0457-00			11	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
3-1	----- -----			1	CKT BOARD ASSY:MAIN INTERFACE(SEE A50 REPL)		
					(ATTACHING PARTS)		
-2	211-0534-00			19	SCR,ASSEM,WSHR:6-32 X 0.312 INCH,PNH STL	83385	OBD
					- - - * - - -		
	----- -----			-	CKT BOARD ASSY INCLUDES:		
-3	129-0589-00			19	. POST,ELEC-MECH:0.25 HEX X 0.95 L	80009	129-0589-00
-4	131-2352-00			13	. CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
-5	131-2351-00			13	. CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
-6	131-1097-00			9	. CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT	24931	28JR220-2
-7	131-0589-00			7	. TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
-8	131-1688-00			2	. TERM,QIK DISC:MALE,0.032 X 0.25 BL,45 DEG	00779	42577-4
					(ATTACHING PARTS)		
-9	211-0507-00			2	. SCREW,MACHINE:6-32 X 0.312 INCH,PNH STL	83385	OBD
-10	210-0457-00			2	. NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
					- - - * - - -		
-11	131-2351-00			2	. CONN,RCPT,ELEC:CKT BD,40/80 CONT,FEMALE	05574	000231-4123
-12	351-0352-01			2	. GUIDE,CKT CARD:WITHOUT INSERT	80009	351-0352-01
					(ATTACHING PARTS)		
-13	211-0061-00			2	. SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
					- - - * - - -		
-14	131-2352-00			2	. CONN,RCPT,ELEC:CKT BD,22/44 CONT,FEMALE	00779	532062-1
-15	351-0352-01			2	. GUIDE,CKT CARD:WITHOUT INSERT	80009	351-0352-01
					(ATTACHING PARTS)		
-16	211-0061-00			2	. SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
					- - - * - - -		
-17	386-4120-00			1	. STIF,CKT BD:15.2 L,AL,REAR	80009	386-4120-00
-18	343-0837-00			1	. RTNR,PWR CABLE:5.7 L,AL	80009	343-0837-00
					(ATTACHING PARTS)		
-19	211-0507-00			2	. SCREW,MACHINE:6-32 X 0.312 INCH,PNH STL	83385	OBD
					- - - * - - -		
-20	255-0334-00			3	. PLASTIC CHANNEL:12.75 X 0.175X 0.155,NYL	11897	122-37-2500
-21	175-2428-00			1	. CA ASSY,SP,ELEC:24,18 AWG,24.0 L	80009	175-2428-00
	----- -----			-	. (A50P560 GOES TO A60A1J1)		
-22	175-2396-00			1	CA ASSY,SP,ELEC:7,22 AWG,28.0 L	80009	175-2396-00
	----- -----			-	(A50P083 GOES TO A40P3)		

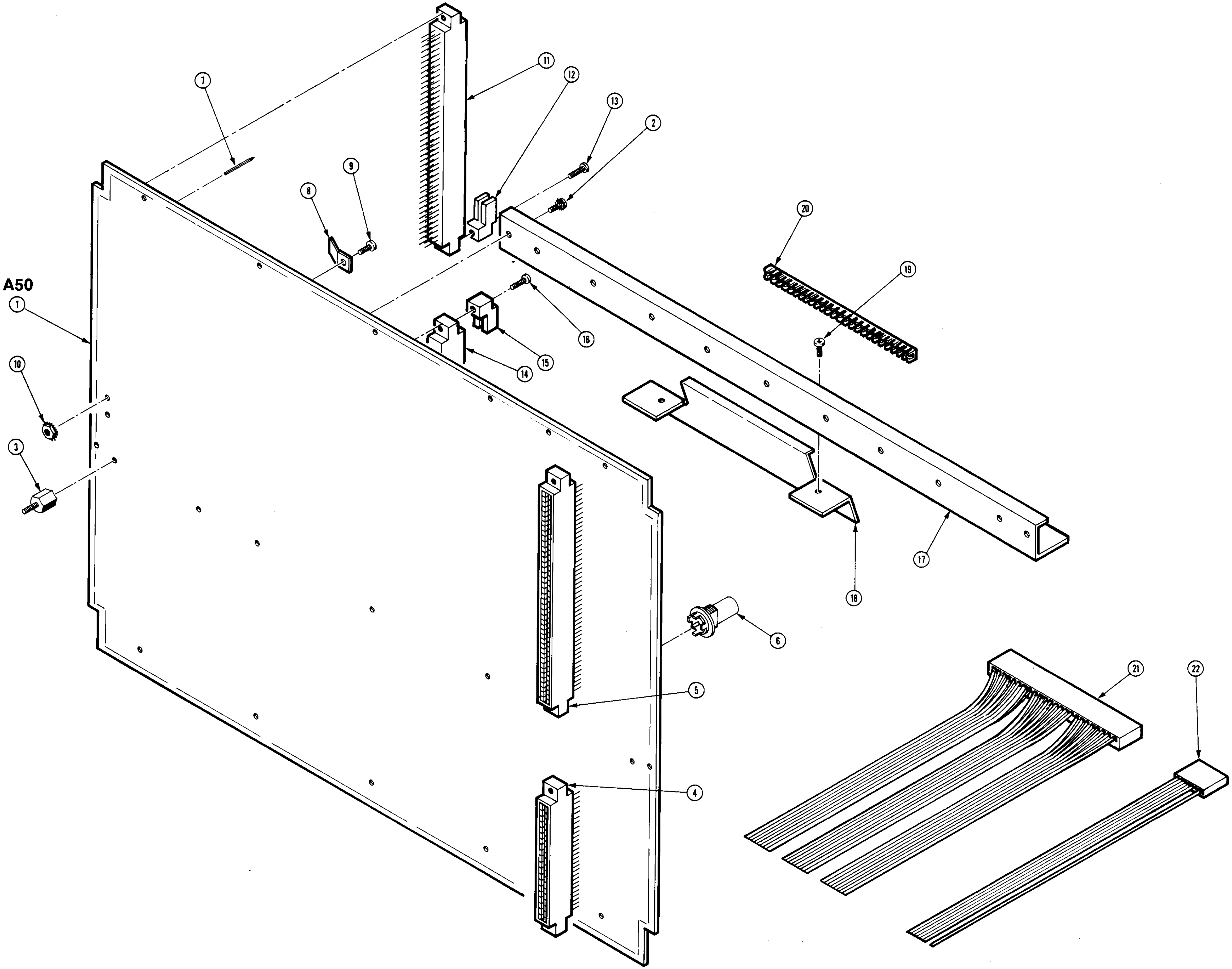


FIG. 3 MAIN INTERFACE CIRCUIT BOARD

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
4-1	012-0869-00			6	CABLE,INTCON:15.0 L	80009	012-0869-00
	----- -----			-	(A50P878 GOES TO J202,A50P978 GOES TO		
	----- -----			-	J203,A50P888 GOES TO J204,A50P988 GOES		
	----- -----			-	TO J205,A50P948 GOES TO J208,A50P848		
	----- -----			-	GOES TO J207)		
					(ATTACHING PARTS)		
-2	220-0497-00			6	NUT,PLAIN,HEX.:0.5-28 X 0.562 INCH HEX,BRS	73743	OBD
					- - - * - - -		
-3	012-0869-01			2	CABLE,INTCON:15.0 L	80009	012-0869-01
	----- -----			-	(A50P868 GOES TO J200,A50P968 GOES		
	----- -----			-	TO J201)		
					(ATTACHING PARTS)		
-4	220-0497-00			2	NUT,PLAIN,HEX.:0.5-28 X 0.562 INCH HEX,BRS	73743	OBD
					- - - * - - -		
-5	134-0067-00			3	BUTTON,PLUG:GRAY PLASTIC	80009	134-0067-00
-6	386-4193-00			2	STIF,REAR PANEL:LEFT,AL	80009	386-4193-00
					(ATTACHING PARTS)		
-7	212-0008-00			4	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL	83385	OBD
-8	212-0010-00			6	SCREW,MACHINE:8-32 X 0.625 INCH,PNH STL	83385	OBD
					- - - * - - -		
-9	386-4565-00			1	STIFFENER,PANEL:REAR,AL	80009	386-4565-00
					(ATTACHING PARTS)		
-10	211-0510-00			3	SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-11	333-2565-00			1	PANEL,REAR:	80009	333-2565-00
					(ATTACHING PARTS)		
-12	131-0890-00			10	LOCK,CONNECTOR:4-40 X 0.312 L	71468	D 20418-2
					- - - * - - -		
-13	200-2453-00			1	COVER,HOLE:GPIB,AL	80009	200-2453-00
					(ATTACHING PARTS)		
-14	212-0518-00			2	SCREW,MACHINE:10-32 X 0.312,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-15	333-2540-00			1	PANEL,REAR:	80009	333-2540-00
					(ATTACHING PARTS)		
-16	213-0793-00			16	SCREW,TPG,TF:6-32 X 0.4375,TAPTITE,FIL	93907	OBD
					- - - * - - -		
-17	367-0281-00			1	HANDLE,ACCESS:11.05 L,AL	80009	367-0281-00
					(ATTACHING PARTS)		
-18	211-0012-00			6	SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL	83385	OBD
-19	210-0004-00			6	WASHER,LOCK:#4 INTL,0.015THK,STL CD PL	000BK	OBD
-20	210-0244-00			1	TERMINAL,LUG:#10,RING,SOLDERLESS,CU TIN PL	86928	A373-148-1
					- - - * - - -		
-21	----- -----			1	CKT BOARD ASSY:I/O INTERFACE(SEE A30 REPL)		
-22	131-0812-00			3	. CONN,RCPT,ELEC:CKT BD MT,25 CONT, FEMALE	00779	205858-1
-23	131-2199-00			2	. CONN,RCPT,ELEC:CKT CARD,25 CONT,MALE,RIGHT	00779	205857-1
					(ATTACHING PARTS)		
-24	211-0097-00			4	. SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
-25	210-0586-00			4	. NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
-26	210-0586-00			4	. NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
					- - - * - - -		
-27	136-0756-00			1	. SKT,PL-IN ELEK:MICROCIRCUIT,18 DIP	09922	DILB18P-108
-28	136-0728-00			17	. SKT,PL-IN ELEK:MICROCKT,14 CONTACT	09922	DILB14P-108
-29	136-0752-00			1	. SKT,PL-IN ELEK:MICROCIRCUIT,20 DIP	09922	DILB20P-108
-30	136-0729-00			2	. SKT,PL-IN ELEK:MICROCKT,16 CONTACT	09922	DILB16P-108T
-31	131-1425-00			SET	. CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
-32	131-1426-00			SET	. CONTACT SET,ELE:R ANGLE,0.250L,STRIP OF 36	22526	65524-136
-33	131-0608-00			89	. TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-34	131-0993-00			3	. BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-35	407-2323-01			1	BRACKET CKT BD:AL,W/GUIDE	80009	407-2323-01
					(ATTACHING PARTS)		
-36	210-0510-00			5	SCREW,MACHINE:6-32 X 0.375 INCH,PNH,STL	83385	OBD
-37	210-0006-00			4	WASHER,LOCK:#6 INTL,0.018THK,STL CD PL	78189	1206-00-00-0541C
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
4-38	407-2485-00			1	BRACKET,SUPPORT:AIR BAFFLE,AL	80009	407-2485-00
					(ATTACHING PARTS)		
-39	211-0510-00			2	SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
-40	210-0006-00			2	WASHER,LOCK:#6 INTL,0.018THK,STL CD PL	78189	1206-00-00-0541C
					- - - * - - -		
-41	343-0953-00			1	CLAMP,CABLE:AIR BAFFLE,AL	80009	343-0953-00
					(ATTACHING PARTS)		
-42	211-0510-00			4	SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
-43	252-0576-00			AR	PAPER:0.002,KRAFT,ELEC GRADE		
-44	407-2484-00			1	BRACKET,AIR BAF:REAR,AL	80009	407-2484-00
-45	407-2408-00			1	BRACKET,ANGLE:BOTTOM,AL	80009	407-2408-00
-46	348-0085-00			1	GROMMET,PLASTIC:U-SHAPED	80009	348-0085-00

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
5-	----- -----			1	POWER SUPPLY:(SEE A60 REPL)		
-1	200-2344-00			1	. COV ASSY,PWR SU:	80009	200-2344-00
					(ATTACHING PARTS)		
-2	211-0097-00			5	. SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
					- - - * - - -		
-3	200-2222-00			1	. GUARD,FAN:	81041	6-182-033
					(ATTACHING PARTS)		
-4	211-0517-00			4	. SCREW,MACHINE:6-32 X 1 INCH,PNH,STL	83385	OBD
-5	210-0949-00			4	. WASHER,FLAT:0.141 ID X 0.50 INCH OD,BRS	12327	OBD
-6	348-0020-00			4	. GROMMET,RUBBER:0.25 INCH	70485	374
-7	210-0407-00			4	. NUT,PLAIN,HEX.:6-32 X 0.25 INCH,BRS	73743	3038-0228-402
					- - - * - - -		
-8	214-2986-00			1	. SPRING,CAP:CU BE	80009	214-2986-00
					(ATTACHING PARTS)		
-9	211-0507-00			2	. SCREW,MACHINE:6-32 X 0.312 INCH,PNH STL	83385	OBD
-10	210-0457-00			2	. NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
					- - - * - - -		
-11	119-0026-00			1	. FAN,AXIAL:1.500 X 4.750 INCH,WHISPER	82877	WR2A1
-12	175-4505-00			1	. CA ASSY,SP,ELEC:2,23 AWG,14.0 L	80009	175-4505-00
	204-0678-00			1	. CONN BODY,PL,EL:FOR 3 FEMALE CONTACTS	27264	10-17-2032
	131-1815-00			2	. CONTACT,ELEC:22-30 AWG,FEMALE,BRASS	27264	08-56-0110
-13	----- -----			1	. CKT BD ASSY:FAN REGULATOR(SEE A60A3 REPL)		
					(ATTACHING PARTS)		
-14	211-0101-00			4	. SCREW,MACHINE:4-40 X 0.25,100 DEG,FLH STL	83385	OBD
					- - - * - - -		
	----- -----			-	. CKT BOARD ASSY INCLUDES:		
-15	131-0589-00			2	. . TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
-16	131-2206-00			2	. . CONN,RCPT,ELEC:CKT BD,4 CONTFEMALE	27264	09-62-3041
-17	136-0269-02			1	. . SKT,PL-IN ELEK:MICROCIRCUIT,14 DIP,LOW CLE	73803	CS9002-14
-18	129-0160-00			4	. . SPACER POST:0.25 L X 0.2188 TO MT SEAT	80009	129-0160-00
-19	200-2185-00			1	. COVER,XSTR:	80009	200-2185-00
					(ATTACHING PARTS)		
-20	211-0097-00			3	. SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
					- - - * - - -		
-21	129-0457-00			2	. SPACER,POST:1.07L,W/4-40 TAP 1 END	80009	129-0457-00
	644-0156-00			1	. REGULATOR ASSY:	80009	644-0156-00
					(ATTACHING PARTS)		
-22	211-0061-00			3	. SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
					- - - * - - -		
	----- -----			-	. REGULATOR ASSY INCLUDES:		
-23	----- -----			1	. . CKT BOARD ASSY:REGUALTOR(SEE A60A2 REPL)		
					(ATTACHING PARTS)		
-24	211-0008-00			6	. . SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
					- - - * - - -		
	----- -----			-	. . CKT BOARD ASSY INCLUDES:		
-25	131-2265-00			2	. . . TERM,FEEDTHRU:10 PIN,INSULATED	27264	09-70-1101
-26	----- -----			2	. . TRANSISTOR:(SEE Q11,Q53 REPL)		
					(ATTACHING PARTS)		
-27	211-0025-00			2	. . SCREW,MACHINE:4-40 X 0.375 100 DEG,FLH STL	83385	OBD
-28	210-0406-00			2	. . NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS	73743	12161-50
-29	210-0054-00			2	. . WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD STL	83385	OBD
-30	210-0994-00			2	. . WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
-31	210-1171-00			2	. . WSHR,SHOULDERED:0.116 ID X 0.138 INCH OD	52905	A7148516P2
					- - - * - - -		
-32	342-0203-00			2	. . INSULATOR,PLATE:XSTR,0.675 X 0.625 X 0.001	18722	DF103C
-33	----- -----			-	. . TRANSISTOR:(SEE Q12,Q52 REPL)		
					(ATTACHING PARTS)		
-34	211-0025-00			2	. . SCREW,MACHINE:4-40 X 0.375 100 DEG,FLH STL	83385	OBD
-35	210-0406-00			2	. . NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS	73743	12161-50
-36	210-0054-00			2	. . WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD STL	83385	OBD
-37	210-0994-00			2	. . WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
-38	210-1171-00			2	. . WSHR,SHOULDERED:0.116 ID X 0.138 INCH OD	52905	A7148516P2
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
5-39	342-0203-00			2	. . INSULATOR,PLATE:XSTR,0.675 X 0.625 X 0.001	18722	DF103C
-40	----- -----			3	. . TRANSISTOR:(SEE Q21,Q42,Q51 REPL)		
					(ATTACHING PARTS)		
-41	211-0025-00			3	. . SCREW,MACHINE:4-40 X 0.375 100 DEG,FLH STL	83385	OBD
-42	210-0406-00			3	. . NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS	73743	12161-50
-43	210-0054-00			3	. . WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD STL	83385	OBD
-44	210-0994-00			3	. . WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
-45	210-1171-00			3	. . WSHR,SHOULDERED:0.116 ID X 0.138 INCH OD	52905	A7148516P2
					- - - * - - -		
-46	342-0203-00			2	. . INSULATOR,PLATE:XSTR,0.675 X 0.625 X 0.001	18722	DF103C
-47	----- -----			2	. . TRANSISTOR:(SEE Q23,Q41 REPL)		
					(ATTACHING PARTS)		
-48	211-0025-00			2	. . SCREW,MACHINE:4-40 X 0.375 100 DEG,FLH STL	83385	OBD
-49	210-0406-00			2	. . NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS	73743	12161-50
-50	210-0054-00			2	. . WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD STL	83385	OBD
-51	210-0994-00			2	. . WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
-52	210-1171-00			2	. . WSHR,SHOULDERED:0.116 ID X 0.138 INCH OD	52905	A7148516P2
					- - - * - - -		
-53	342-0203-00			2	. . INSULATOR,PLATE:XSTR,0.675 X 0.625 X 0.001	18722	DF103C
-54	----- -----			2	. . TRANSISTOR:(SEE Q22,Q31 REPL)		
					(ATTACHING PARTS)		
-55	211-0025-00			2	. . SCREW,MACHINE:4-40 X 0.375 100 DEG,FLH STL	83385	OBD
-56	210-0406-00			2	. . NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS	73743	12161-50
-57	210-0054-00			2	. . WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD STL	83385	OBD
-58	210-0994-00			2	. . WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
-59	210-1171-00			2	. . WSHR,SHOULDERED:0.116 ID X 0.138 INCH OD	52905	A7148516P2
					- - - * - - -		
-60	342-0203-00			2	. . INSULATOR,PLATE:XSTR,0.675 X 0.625 X 0.001	18722	DF103C
-61	386-4138-00			1	. . SUPPORT,CKT BD:ALUMINUM	80009	386-4138-00
-62	----- -----			1	. CKT BOARD ASSY:INVERTER(SEE A60A1 REPL)		
					(ATTACHING PARTS)		
-63	211-0097-00			14	. SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
					- - - * - - -		
-64	----- -----			2	. . COIL,RF:(SEE A60A1L251,A60A1L252 REPL)		
					(ATTACHING PARTS)		
-65	211-0020-00			2	. . SCREW,MACHINE:4-40 X 1.125 INCH,PNH STL	83385	OBD
	----- -----			-	. . (USED ON 670-6046-00 ONLY)		
	211-0019-00			2	. . SCREW,MACHINE:4-40 X 1.0 INCH,PNH STL	83385	OBD
	----- -----			-	. . (USED ON 670-6046-01 ONLY)		
-66	210-0851-00			2	. . WASHER,FLAT:0.119 ID X 0.375 INCH OD,STL	12327	OBD
-67	200-0848-00			2	. . CAP,INSERT,KNOB:0.765 OD X 0.118 H,BLACK	80009	200-0848-00
-68	210-0966-00			2	. . WASHER,NONMETAL:0.312 ID X 0.875" OD,RBR	80009	210-0966-00
-69	210-0586-00			2	. . NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
					- - - * - - -		
	----- -----			-	. CKT BOARD ASSY INCLUDES:		
-70	----- -----			2	. . COIL,RF:(SEE A60A1A60A1L1,L151 REPL)		
					(ATTACHING PARTS)		
-71	211-0020-00			2	. . SCREW,MACHINE:4-40 X 1.125 INCH,PNH STL	83385	OBD
	----- -----			-	. . (USED ON 670-6046-00 ONLY)		
	211-0019-00			2	. . SCREW,MACHINE:4-40 X 1.0 INCH,PNH STL	83385	OBD
	----- -----			-	. . (USED ON 670-6046-01 ONLY)		
-72	210-0851-00			2	. . WASHER,FLAT:0.119 ID X 0.375 INCH OD,STL	12327	OBD
-73	200-0848-00			2	. . CAP,INSERT,KNOB:0.765 OD X 0.118 H,BLACK	80009	200-0848-00
-74	210-0966-00			2	. . WASHER,NONMETAL:0.312 ID X 0.875" OD,RBR	80009	210-0966-00
-75	210-0586-00			2	. . NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
					- - - * - - -		
-76	136-0260-02			1	. . SKT,PL-IN ELEK:MICROCIRCUIT,16 DIP,LOW CLE	71785	133-51-92-008
-77	136-0269-02			2	. . SKT,PL-IN ELEK:MICROCIRCUIT,14 DIP,LOW CLE	73803	CS9002-14
-78	131-0608-00			23	. . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-79	131-2403-00			2	. . TERM SET,PIN:12 CONT,MALE	80009	131-2403-00
-80	131-2264-00			2	. . CONN,RCPT,ELEC:CKT BD,10 CONTACT,R ANGLE	27264	09-62-3101
-81	----- -----			1	. . TRANSISTOR:(SEE A60A1Q441 REPL)		
					(ATTACHING PARTS)		
-82	211-0097-00			1	. . SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
-83	210-0586-00			1	. . NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
5-84	----- -----			1	. . COIL,RF:(SEE A60A1L331 REPL)		
					(ATTACHING PARTS)		
-85	210-0408-00			2	. . NUT,PLAIN,HEX.:6-32 X 0.312 INCH,BRS	73743	3040-402
					- - - * - - -		
-86	136-0252-01			9	. . CONTACT,ELEC:0.178 INCH LONG	00779	1-332095-2
-87	131-2205-00			2	. . TERM,FEEDTHRU:4 PIN INSULATED	27264	H-2402-12KG
-88	162-0018-00			FT	. . INSUL SLVG,ELEC:0.208 ID,VINYL	96904	OBD
-89	129-0457-00			1	. . SPACER,POST:1.07L,W/4-40 TAP 1 END	80009	129-0457-00
					(ATTACHING PARTS)		
-90	210-0406-00			1	. . NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS	73743	12161-50
	----- -----			-	. . (USED ON 670-6046-00 ONLY)		
	210-0586-00			1	. . NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
	----- -----			-	. . (USED ON 670-6046-01 ONLY)		
					- - - * - - -		
-91	386-3928-00			1	. . SUPPORT,XSTR:	80009	386-3928-00
					(ATTACHING PARTS)		
-92	211-0097-00			2	. . SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
					- - - * - - -		
-93	----- -----			1	. . COIL ASSY,RF:(SEE A60A1T1 REPL)		
					(ATTACHING PARTS)		
-94	211-0020-00			1	. . SCREW,MACHINE:4-40 X 1.125 INCH,PNH STL	83385	OBD
-95	210-0851-00			1	. . WASHER,FLAT:0.119 ID X 0.375 INCH OD,STL	12327	OBD
-96	210-0586-00			1	. . NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
					- - - * - - -		
-97	----- -----			1	. . COIL,RF:(SEE A60A1L301 REPL)		
	----- -----			-	. . (USED ON 620-0286-01 ONLY)		
					(ATTACHING PARTS)		
-98	211-0019-00			1	. . SCREW,MACHINE:4-40 X 1.0 INCH,PNH STL	83385	OBD
	----- -----			-	. . (USED ON 620-0286-01 ONLY)		
-99	210-0586-00			1	. . NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
	----- -----			-	. . (USED ON 620-0286-01 ONLY)		
-100	210-0851-00			1	. . WASHER,FLAT:0.119 ID X 0.375 INCH OD,STL	12327	OBD
	----- -----			-	. . (USED ON 620-0286-01 ONLY)		
					- - - * - - -		
-101	342-0389-00			2	. . INSULATOR,PLATE:TRANSISTOR,PLASTIC	80009	342-0389-00
-102	342-0425-00			1	. . INSULATOR,FILM:TRANSISTOR,PLASTIC	80009	342-0425-00
-103	361-0908-00			1	. . SPACER,PLATE:0.562 X 2.4 X1.0 AL	80009	361-0908-00
-104	342-0424-00			1	. . INSULATOR,FILM:HEAT SINK,PLASTIC	55285	OBD
-105	----- -----			8	. . SEMICOND DVC,DI:(SEE A60A1CR2,A60A1CR22,		
	----- -----			-	. . A60A1CR31,A60A1CR32,A60A1CR33,A60A1CR41,		
	----- -----			-	. . A60A1CR42,A60A1CR43 REPL)		
					(ATTACHING PARTS)		
-106	211-0097-00			8	. . SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
-107	210-0054-00			8	. . WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD STL	83385	OBD
-108	210-0994-00			8	. . WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
-109	210-1171-00			8	. . WSHR,SHOULDERED:0.116 ID X 0.138 INCH OD	52905	A7148516P2
-110	342-0202-00			8	. . INSULATOR,PLATE:TRANSISTOR	01295	10-21-023-106
					- - - * - - -		
-111	214-2882-00			1	. . HEAT SINK,XSTR:(5)TO-220,(3)MU-27,AL	80009	214-2882-00
					(ATTACHING PARTS)		
-112	211-0097-00			2	. . SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
-113	211-0061-00			2	. . SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
					- - - * - - -		
-114	361-0967-00			1	. . SPACER,PLATE:1.0 X 2.8 X 2.0,AL	80009	361-0967-00
					(ATTACHING PARTS)		
-115	211-0016-00			2	. . SCREW,MACHINE:4-40 X 0.625 INCH,PNH STL	83385	OBD
-116	211-0097-00			4	. . SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
					- - - * - - -		
-117	----- -----			1	. . RESISTOR:(SEE R1002 REPL)		
					(ATTACHING PARTS)		
-118	211-0198-00			2	. . SCREW,MACHINE:4-40 X 0.438 PNH,STL,POZ	77250	OBD
-119	210-0586-00			2	. . NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
5-120	----- -----			1	. . TRANSISTOR:(SEE Q1001 REPL)		
					(ATTACHING PARTS)		
-121	210-0455-00			1	. . NUT,PLAIN,HEX.:0.25-28 X 0.375 INCH,BRASS	73743	3089-402
-122	210-0046-00			1	. . WASHER,LOCK:0.261 ID,INTL,0.018 THK,BRS	78189	1214-05-00-0541C
-123	210-0269-00			1	. . TERMINAL,LUG:NON LOCKING,0.257" MTG HOLE	78584	905-020
-124	210-0905-00			1	. . WASHER,FLAT:0.256 ID X 0.05 THK,BRS	83385	OBD
					- - - * - - -		
-125	342-0044-00			2	. . INSULATOR,WSHR:0.26 ID X 8.55 INCH OD,MICA	08530	OBD
-126	210-1115-00			1	. . WASHER,FLAT:0.27 ID X 0.062 THK,0.37 OD	86445	OBD
-127	210-0204-00			1	. . TERMINAL,LUG:0.146 INCH DIA DE,45 DEG BEND	78189	2157-06-01-2520N
					(ATTACHING PARTS)		
-128	210-0407-00			2	. . NUT,PLAIN,HEX.:6-32 X 0.25 INCH,BRS	73743	3038-0228-402
					- - - * - - -		
-129	----- -----			1	. . RESISTOR:(SEE R1001 REPL)		
					(ATTACHING PARTS)		
-130	211-0062-00			2	. . SCREW,MACHINE:2-56 X 0.312,PNH,STL	83385	OBD
					- - - * - - -		
-131	200-1788-01			1	. . COV,PROT,LINE:	80009	200-1788-01
	----- -----			-	. . (USED WITH 620-0286-00 ONLY)		
-132	----- -----			1	. . FILTER,RFI:(SEE FL1001 REPL)		
	----- -----			-	. . (USED WITH 620-086-00 ONLY)		
					(ATTACHING PARTS)		
-133	211-0510-00			2	. . SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL	83385	OBD
	----- -----			-	. . (USED WITH 620-0286-00 ONLY)		
					- - - * - - -		
-134	200-0237-03			1	. . COVER,FUSE HLDR:	80009	200-0237-03
	----- -----			-	. . (USED WITH 620-0286-00 ONLY)		
-135	200-2264-00			1	. . CAP.,FUSEHOLDER:3AG FUSES	S3629	FEK 031 1666
	----- -----			-	. . (USED WITH 620-0286-00 ONLY)		
-136	204-0833-00			1	. . BODY,FUSEHOLDER:3AG & 5 X 20MM FUSES	S3629	031.1653(MDLFEU)
	----- -----			-	. . (USED WITH 620-0286-00 ONLY)		
-137	210-1039-00			1	. . WASHER,LOCK:INT,0.521 ID X 0.625 INCH OD	24931	OBD
	----- -----			-	. . (USED WITH 620-0286-00 ONLY)		
-138	----- -----			1	. . SWITCH,ROCKER:(SEE S1001 REPL)		
-139	129-0765-00			6	. . SPACER,POST:0.545 L,W/4-40 THKD BOTH END	80009	129-0765-00
-140	407-2299-00			1	. . BRACKET,CKT BD:ALUMINUM	80009	407-2299-00
					(ATTACHING PARTS)		
-141	211-0061-00			4	. . SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
					- - - * - - -		
-142	129-0697-00			5	. SPACER POST:0.562 L,W/4-40 THRU THD,AL	80009	129-0697-00
					(ATTACHING PARTS)		
-143	211-0061-00			5	. SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
					- - - * - - -		
-144	129-0583-00			4	. SPACER,POST:0.59 L,W/4-40 THKD,PLSTC	80009	129-0583-00
					(ATTACHING PARTS)		
-145	211-0061-00			4	. SCREW,MACHINE:4-40 X 0.50,FILH,STL,CD PL	83385	OBD
					- - - * - - -		
-146	342-0464-00			1	. INSULATOR,PLATE:HEAT SINK,SILICONE RUBBER	55285	OBD
-147	386-4137-00			1	. PANEL,PWER SUPLY:REAR,ALUMINUM	80009	386-4137-00
-148	179-2729-00			1	. . WIRING HARNESS:POWER	80009	179-2729-00
-149	----- -----			1	. CKT BOARD ASSY:FILTER(SEE A60A4 REPL)		
	----- -----			-	. (USED WITH 620-0286-01 ONLY)		
					(ATTACHING PARTS)		
-150	211-0097-00			4	. SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
	----- -----			-	. (USED WITH 620-0286-01 ONLY)		
					- - - * - - -		
	----- -----			-	. CKT BOARD ASSY INCLUDES:		
-151	----- -----			2	. . COIL,RF:(SEE A60A4L1,A60A4L2 REPL)		
	----- -----			-	. . (USED WITH 620-0286-01 ONLY)		
					(ATTACHING PARTS)		
-152	212-0667-00			2	. . SCREW,MACHINE:10-24 X 1.25,PNH,NYLON	000KQ	OBD
	----- -----			-	. . (USED WITH 620-0286-01 ONLY)		
-153	220-0835-00			2	. . NUT,PLAIN HEX:10-24,0.375 DIA,NYLON	95987	N-1024-X
	----- -----			-	. . (USED WITH 620-0286-01 ONLY)		
					- - - * - - -		

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5 Name & Description	Mfr Code	Mfr Part Number
5-154	200-2264-00			1	. . CAP.,FUSEHOLDER:3AG FUSES	S3629	FEK 031 1666
	----- -----			-	. . (USED WITH 620-0286-01 ONLY)		
-155	204-0906-00			1	. . BODY,FUSE HOLDER:3AG & 5 X 20MM FUSE	000JL	TYPE FAU031.3573
	----- -----			-	. . (USED WITH 620-0286-01 ONLY)		
-156	198-4696-00			1	. . WIRE SET,ELEC:	80009	198-4696-00
	----- -----			-	. . (USED WITH 620-0286-01 ONLY)		

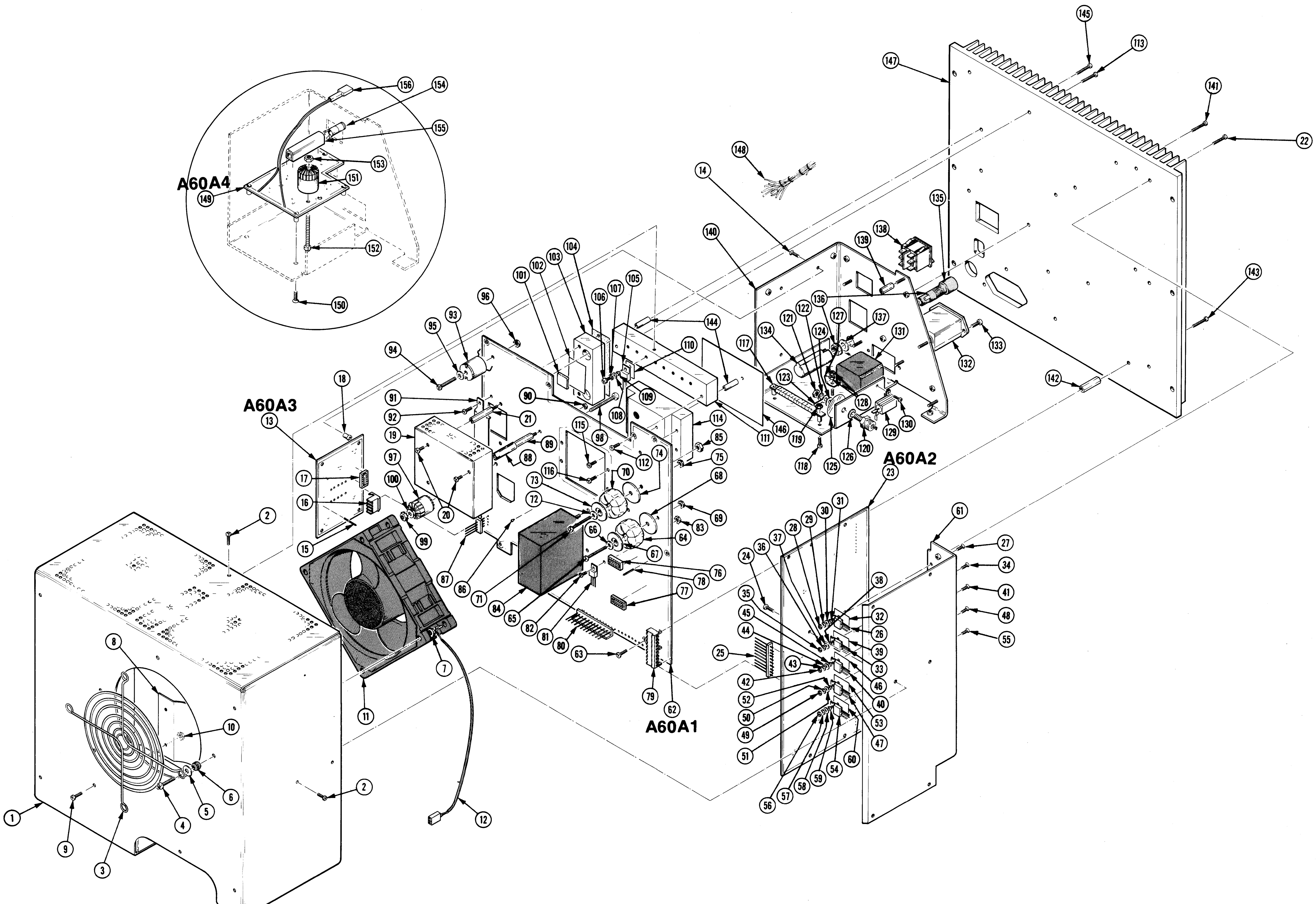


FIG. 5 POWER SUPPLY

Component No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				STANDARD ACCESSORIES		
	070-2924-00			CARD INFO:REFERENCE	80009	070-2924-00
	061-2331-00			MANUAL,TECH:INTERIM OPERATORS	80009	061-2331-00
	----- -----			(OPTION 01 ONLY)		
	070-4328-00			MANUAL,TECH:OPERATOR,PAL	80009	070-4328-00
	----- -----			(OPTION 02 ONLY)		
	070-4317-00			MANUAL,TECH:OPERATORS	80009	070-4317-00
	----- -----			(OPTION 03 ONLY)		
	061-2259-01			MANUAL,TECH:INTERIM,OPERATORS	80009	061-2259-01
	070-3742-00			MANUAL,TECH:SERVICE	80009	070-3742-00
	351-0623-00			SLIDE,DWR,EXT:22.0 L X 1.54,STEEL	80009	351-0623-00
	----- -----			RACK MOUNTING ADAPTERS		
	348-0068-01			RUBBER CABINET FEET	80009	348-0068-01
	161-0066-01			CABLE ASSY,PWR,:3,18 AWG,230V,98.0 L	80009	161-0066-01
	161-0066-09	B010183		CABLE ASSY,PWR:3,0.75MM SQ,220V,96.0 L	80126	OBD
	----- -----			(OPTION A1 EUROPEAN ONLY)		
	161-0066-10	B010183		CABLE ASSY,PWR:3,0.75MM SQ,240V,96.0 L	80126	OBD
	----- -----			(OPTION A2 UNITED KINGDOM ONLY)		
	161-0066-11	B010183		CABLE ASSY,PWR:3,0.75MM,240V,96.0L	S3109	OBD
	----- -----			(OPTION A3 ASUTRALIAN ONLY)		
	161-0066-12	B010183		CABLE ASSY,PWR:3,18 AWG,240V,96.0 L	70903	OBD
	----- -----			(OPTION A4 NORTH AMERICAN ONLY)		
	012-0939-00			RS232C MODEM CABLE		
	070-4455-00			MANUAL,TEHC:PROGRAMMERS REF,1980	80009	070-4455-00
	070-4457-00			MANUAL,TECH:INSTR,1980 GRAPHICS	80009	070-4457-00
	070-4456-00			MANUAL,TECH:1980	80009	070-4456-00
	070-2925-00			MANUAL,TECH:1980(BASIS VIDEO DRIVER)	80009	070-2925-00
	070-2922-00			MANUAL,TECH:INSTR,1980(TERMINAL DRIVER)	80009	070-2922-00
				OPTIONAL ACCESSORIES		
	012-0939-00			CABLE,INTCON:180.0 L(1980 TO RS232C,OPT 12)	80009	012-0939-00
	020-0519-00			COMPONENT KIT:(NTSC)	80009	020-0519-00
	020-0519-01			COMPONENT KIT:(PAL)	80009	020-0519-01
	067-1115-00			FIXTURE,CAL:1980 SERVICE DIAGNOSTIC	80009	067-1115-00

MANUAL CHANGE INFORMATION

At Tektronix, we continually strive to keep up with latest electronic developments by adding circuit and component improvements to our instruments as soon as they are developed and tested.

Sometimes, due to printing and shipping requirements, we can't get these changes immediately into printed manuals. Hence, your manual may contain new change information on following pages.

A single change may affect several sections. Since the change information sheets are carried in the manual until all changes are permanently entered, some duplication may occur. If no such change pages appear following this page, your manual is correct as printed.

Tektronix®
COMMITTED TO EXCELLENCE

MANUAL CHANGE INFORMATION

Date: 2-7-83 Change Reference: C1/283

Product: 1980 Service Volume 1 Manual Part No.: 070-2921-00

DESCRIPTION

SECTION 7 OPTIONS

ADD:

POWER CORD OPTIONS

Option A1

Universal Europe power cord 220 V/16 A. Tektronix Part No. 161-0104-06.

Option A2

UK power cord 240 V/15 A. Tektronix Part No. 161-0104-07.

Option A3

Australian power cord 240 V/10 A. Tektronix Part No. 161-0104-05.

Option A4

North American power cord 240 V/15 A. Tektronix Part No. 161-0104-08.

Tektronix®
COMMITTED TO EXCELLENCE

MANUAL CHANGE INFORMATION

Date: 2-8-83 Change Reference: C2/283

Product: 1980 Service Volume 1 Manual Part No.: 070-2921-00

DESCRIPTION

ELECTRICAL PARTS LIST CHANGE

SECTION 7 REPLACEABLE ELECTRICAL PARTS

CHANGE TO READ:

SECTION 9 REPLACEABLE ELECTRICAL PARTS

MECHANICAL PARTS LIST CHANGE

SECTION 9 REPLACEABLE MECHANICAL PARTS

CHANGE TO READ:

SECTION 11 REPLACEABLE MECHANICAL PARTS

MANUAL CHANGE INFORMATION

Tektronix® COMMITTED TO EXCELLENCE

Date: 4-18-83 Change Reference: M50871

Product: 1980 Service Volume 1 Manual Part No.: 070-2921-00

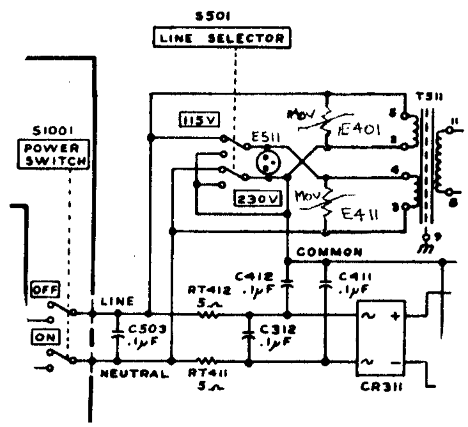
DESCRIPTION

EFF SN B030268 ELECTRICAL PARTS LIST AND SCHEMATIC CHANGES

CHANGE TO:

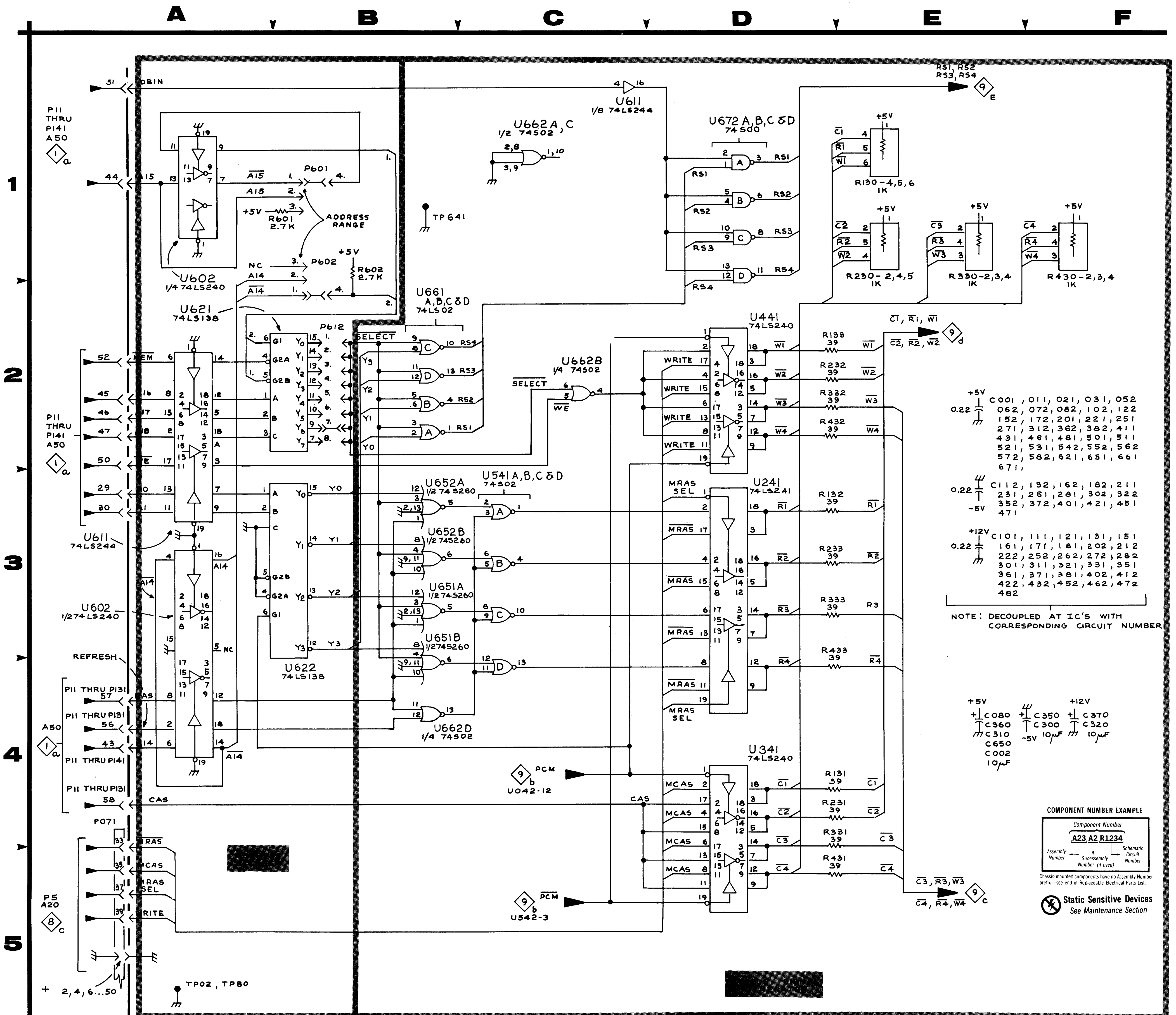
A60	620-0286-02	CKT BOARD ASSY:POWER SUPPLY (OPTION 02 & OPTION 05 ONLY)
	644-0213-02	INVERTER ASSY: (OPTION 02 & OPTION 05 ONLY)
A60A1	670-6046-02	CKT BOARD ASSY:INVERTER (USED WITH 620-0286-02 ONLY)
A60A1E401	307-0449-00	RES.,VAR,SENSITIVE:1900PF,100A,340V
A60A1E411	307-0449-00	RES.,VAR,SENSITIVE:1900PF,100A,340V
A60A1E511*	119-0181-00	ARSR,ELEC SURGE:230, GAS FILLED
A60A4	670-7444-01	CKT BOARD ASSY:LINE FILTER (USED WITH 620-0286-02 ONLY)
A60A4F1	159-0211-00	FUSE,CARTRIDGE:3AG,5A,250V SLOW BLOW (FOR 115V OPERATION)
A60A4F1	159-0217-00	FUSE,CARTRIDGE:3AG,2.5A,250V SLOW BLOW (FOR 230V OPERATION)

The above added part, E511, is located on the A60A1 INVERTER BOARD and shown on diagram ⟨11a⟩ - Partial



*Denotes added part

000-2775-00D



PART OF A18 VIDEO ACQUISITION MEMORY BOARD

1980

2921-128

ADDRESS DECODER ⟨9⟩a

670-5692-01

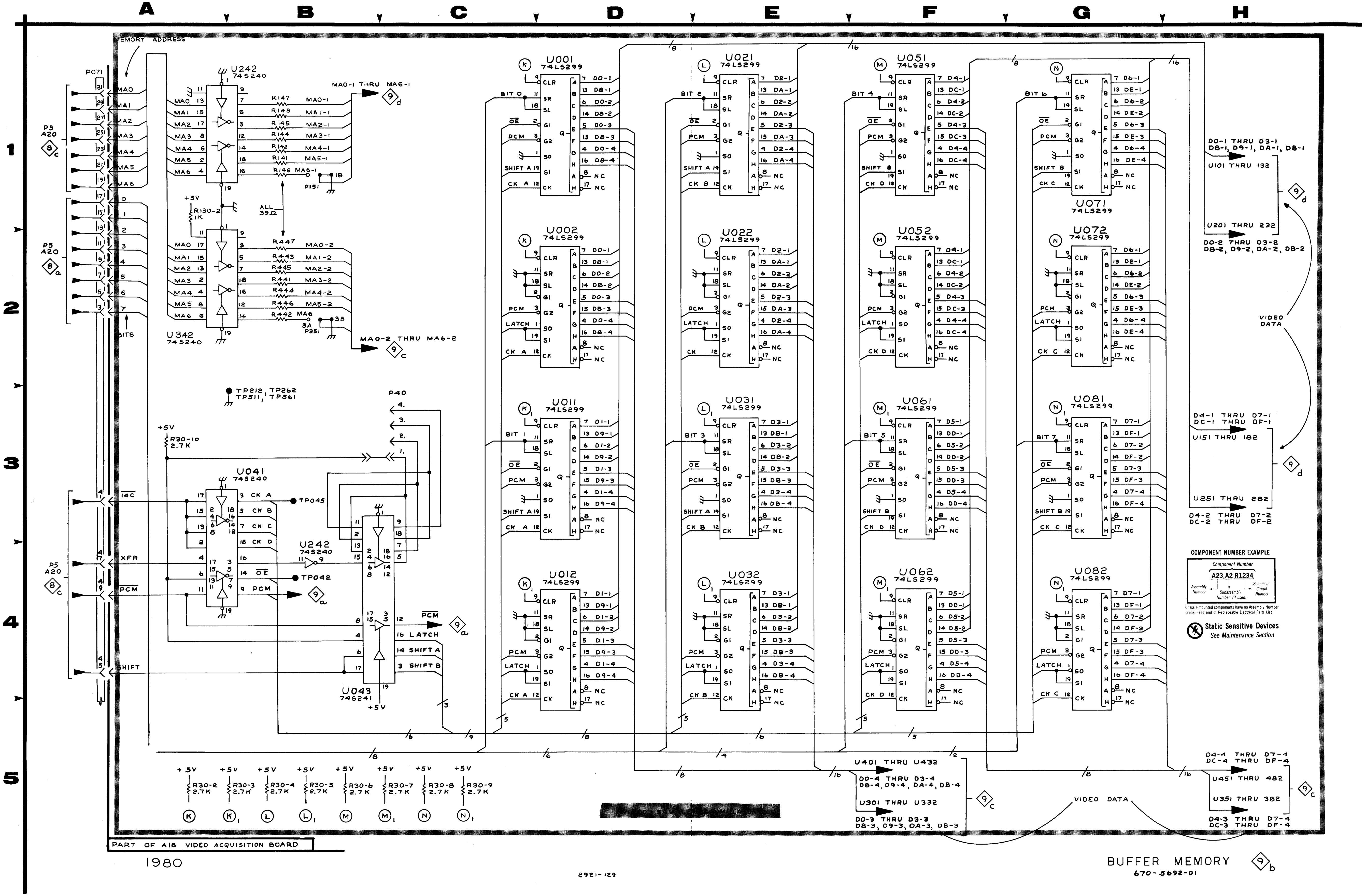
ADDRESS DECODER
P/O A18 670-5692-01

⟨9⟩a

VIDEO SAMPLE ACCUMULATOR DIAGRAM ⟨9⟩b

ASSEMBLY A18 *Partial A18 also shown on diagrams 9a, 9c, 9d and 9e.*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P40	C3	A5	TP42	B4	B5
P71	A1	A8	TP45	B3	A6
P151	B1	C6	TP212	B3	D2
P351	B2	E6	TP262	B3	D7
			TP511	B3	G2
R30B	A5	A4	TP561	B3	G7
R30C	B5	A4			
R30D	B5	A4	U1	D1	B1
R30E	B5	A4	U2	D2	B2
R30F	B5	A4	U11	D3	B2
R30G	C5	A4	U12	D4	B3
R30H	C5	A4	U21	E1	B3
R30I	C5	A4	U22	E2	B3
R30J	A3	A4	U31	E3	B4
R130B	A1	C5	U32	E4	B4
R141	B1	C5	U41	B3	B5
R142	B1	C5	U43	B4	B6
R143	B1	C5	U51	F1	B6
R144	B1	C5	U52	F2	B7
R145	B1	C6	U61	F3	B7
R146	B1	C6	U62	F4	B8
R147	B1	C6	U71	G1	B8
R441	B2	F5	U72	G2	B8
R442	B2	F5	U81	G3	B9
R443	B2	F5	U82	G4	B9
R444	B2	F6	U241	A1	D5
R445	B2	F6	U242	B4	D6
R446	B2	F6	U342	A2	E6
R447	B2	F6			



PART OF A18 VIDEO ACQUISITION BOARD

1980

2921-129

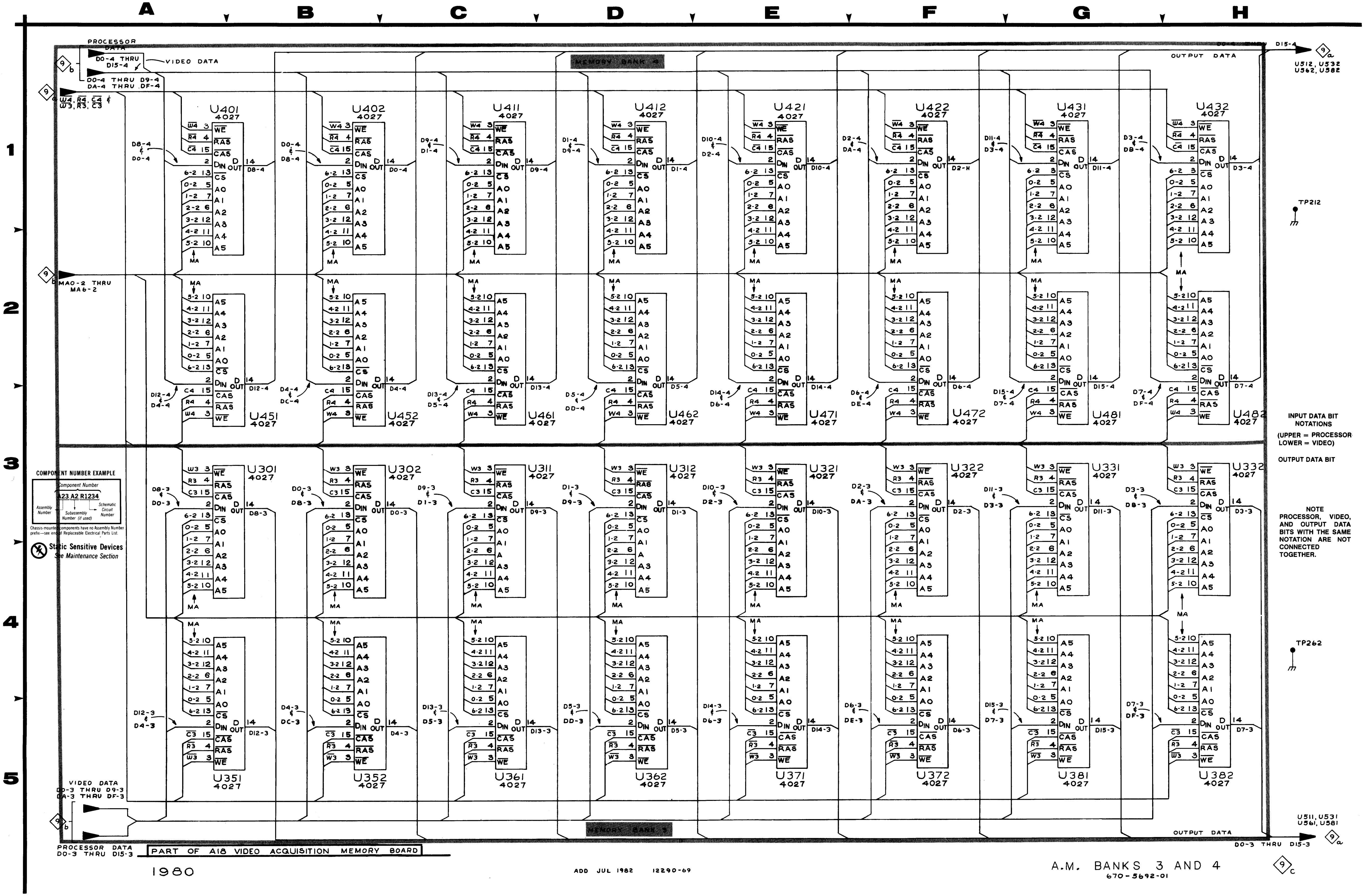
BUFFER MEMORY

670-5692-01

A.M. BANKS 3 & 4 DIAGRAM ⟨9⟩c

ASSEMBLY A18 *Partial A18 also shown on diagrams 9a, 9b, 9d and 9e.*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
U301	B3	E1	U401	A1	F1
U302	B3	E2	U402	B1	F2
U311	C3	E2	U411	C1	F2
U312	D3	E3	U412	D1	F3
U321	E3	E3	U421	E1	F3
U322	F3	E3	U422	F1	F3
U331	G3	E4	U431	G1	F4
U332	H3	E4	U432	H1	F4
U351	A5	E6	U451	B3	F6
U352	B5	E7	U452	B3	F7
U361	C5	E7	U461	C3	F7
U362	D5	E8	U462	D3	F8
U371	E5	E8	U471	E3	F8
U372	F5	E8	U472	F3	F8
U381	G5	E9	U481	G3	F9
U382	H5	E9	U482	H3	F9



INPUT DATA BIT NOTATIONS

(UPPER = PROCESSOR LOWER = VIDEO)

OUTPUT DATA BIT

NOTE
PROCESSOR, VIDEO, AND OUTPUT DATA BITS WITH THE SAME NOTATION ARE NOT CONNECTED TOGETHER.

PART OF A18 VIDEO ACQUISITION MEMORY BOARD

1980

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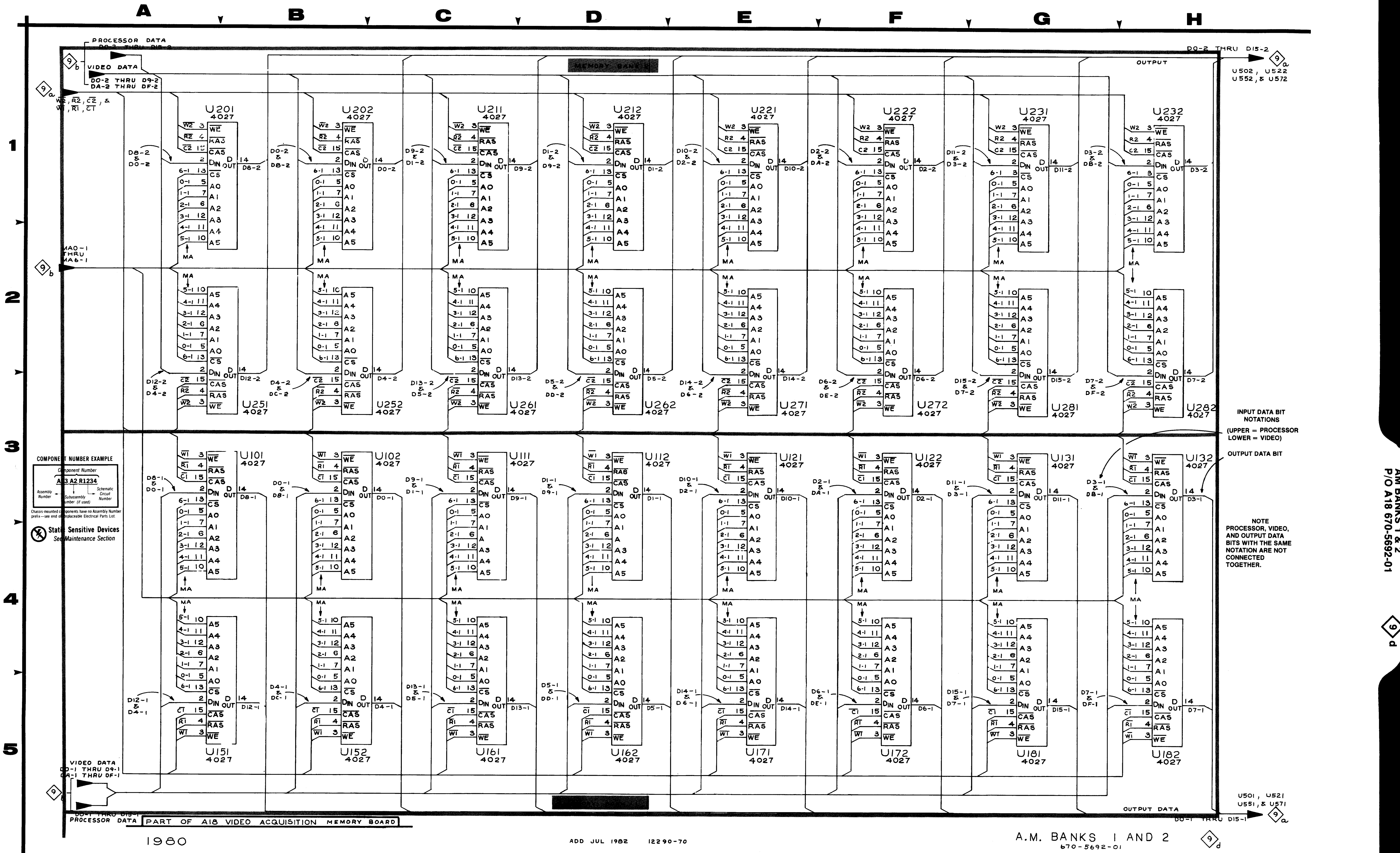
A.M. BANKS 3 AND 4
670-5692-01

AM BANKS 3 & 4
P/O A18 670-5692-01

A.M. BANKS 1 & 2 DIAGRAM ⟨9⟩ d

ASSEMBLY A18 *Partial A18 also shown on diagrams 9a, 9b, 9c and 9e.*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
U101	B3	C1	U211	C1	D2
U102	B3	C2	U212	D1	D2
U111	C3	C2	U221	E1	D2
U112	D3	C3	U222	F1	D4
U121	E3	C3	U231	G1	D4
U122	F3	C3	U232	H1	D4
U131	G3	C4	U251	B3	D6
U132	H3	C4	U252	B3	D7
U151	A5	C6	U252	B3	D7
U152	B5	C7	U261	C3	D7
U161	C5	C7	U262	D3	D8
U162	D5	C8	U271	E3	D8
U171	E5	C8	U271	F3	D8
U172	F5	C8	U272	F3	D8
U181	G5	C9	U281	G3	D9
U182	H5	C9	U282	H3	D9
U201	A1	D1	U501	B3	G1
U202	B1	D2	U521	B3	G3



PART OF A18 VIDEO ACQUISITION MEMORY BOARD

1980

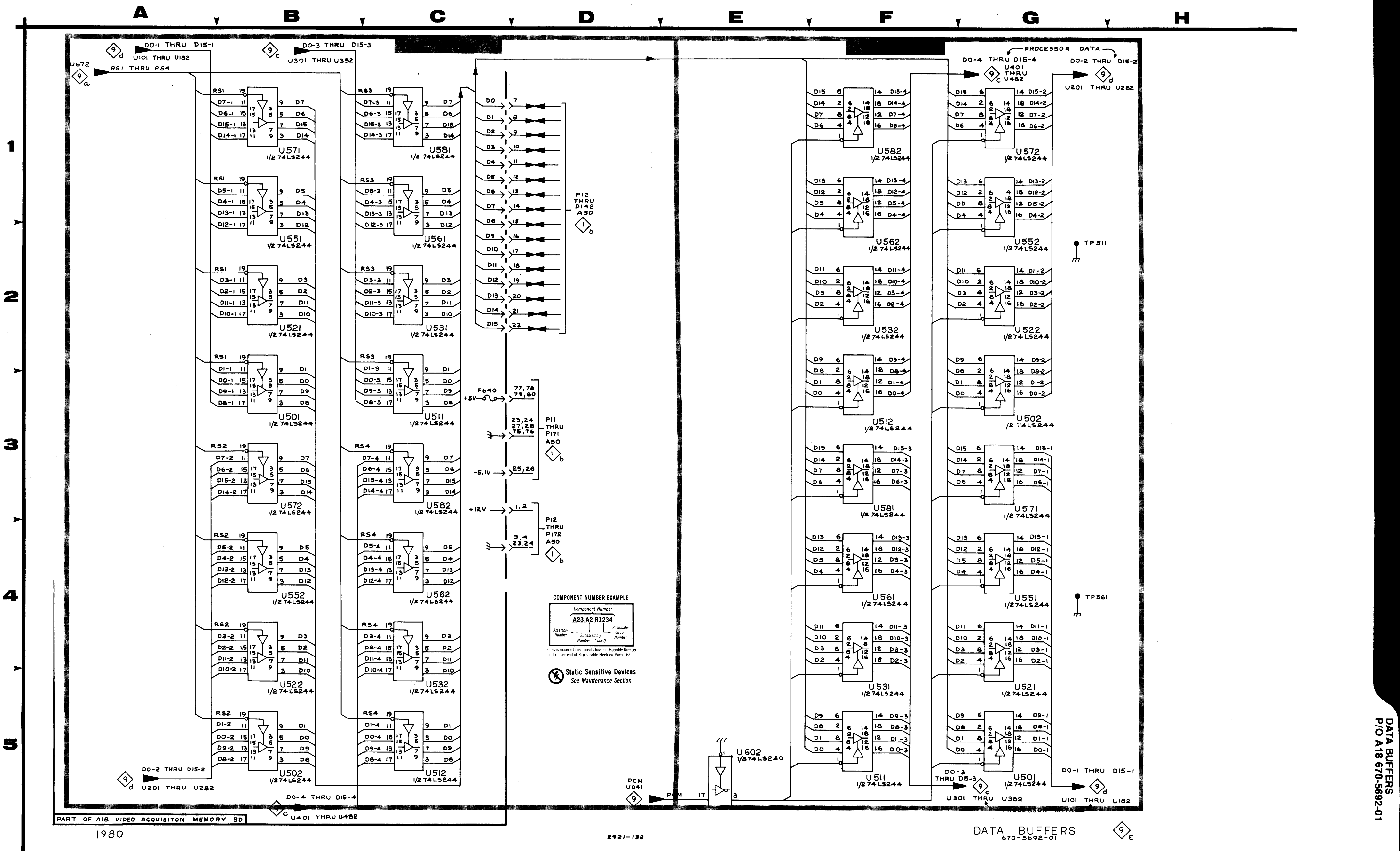
ADD JUL 1982 12290-70

A.M. BANKS 1 AND 2
670-5692-01

DATA BUFFERS DIAGRAM ⟨9⟩ e

ASSEMBLY A18 *Partial A18 also shown on diagrams 9a, 9b, 9c and 9d.*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
U501	B3	G1	U551	G4	G6
U501	G5	G1	U552	B4	G7
U502	B5	G2	U552	G2	G7
U502	G3	G2	U561	C2	G7
U511	C3	G2	U561	F4	G7
U511	F5	G2	U562	C4	G8
U512	C5	G3	U562	F2	G8
U512	F3	G3	U571	B1	G8
U521	B2	G3	U571	G3	G8
U521	G5	G3	U572	B3	G8
U522	B5	G3	U572	G1	G8
U522	G2	G3	U581	C1	G9
U531	C2	G4	U581	F3	G9
U531	F5	G4	U582	C3	G9
U532	C5	G4	U582	F1	G9
U532	F2	G4	U602	E5	H2
U551	B2	G6			


DATA BUFFERS
P/O A18 670-5692-01
PART OF A18 VIDEO ACQUISITON MEMORY BD
1980
2921-132
DATA BUFFERS 670-5692-01
COMPONENT NUMBER EXAMPLE
Static Sensitive Devices
See Maintenance Section

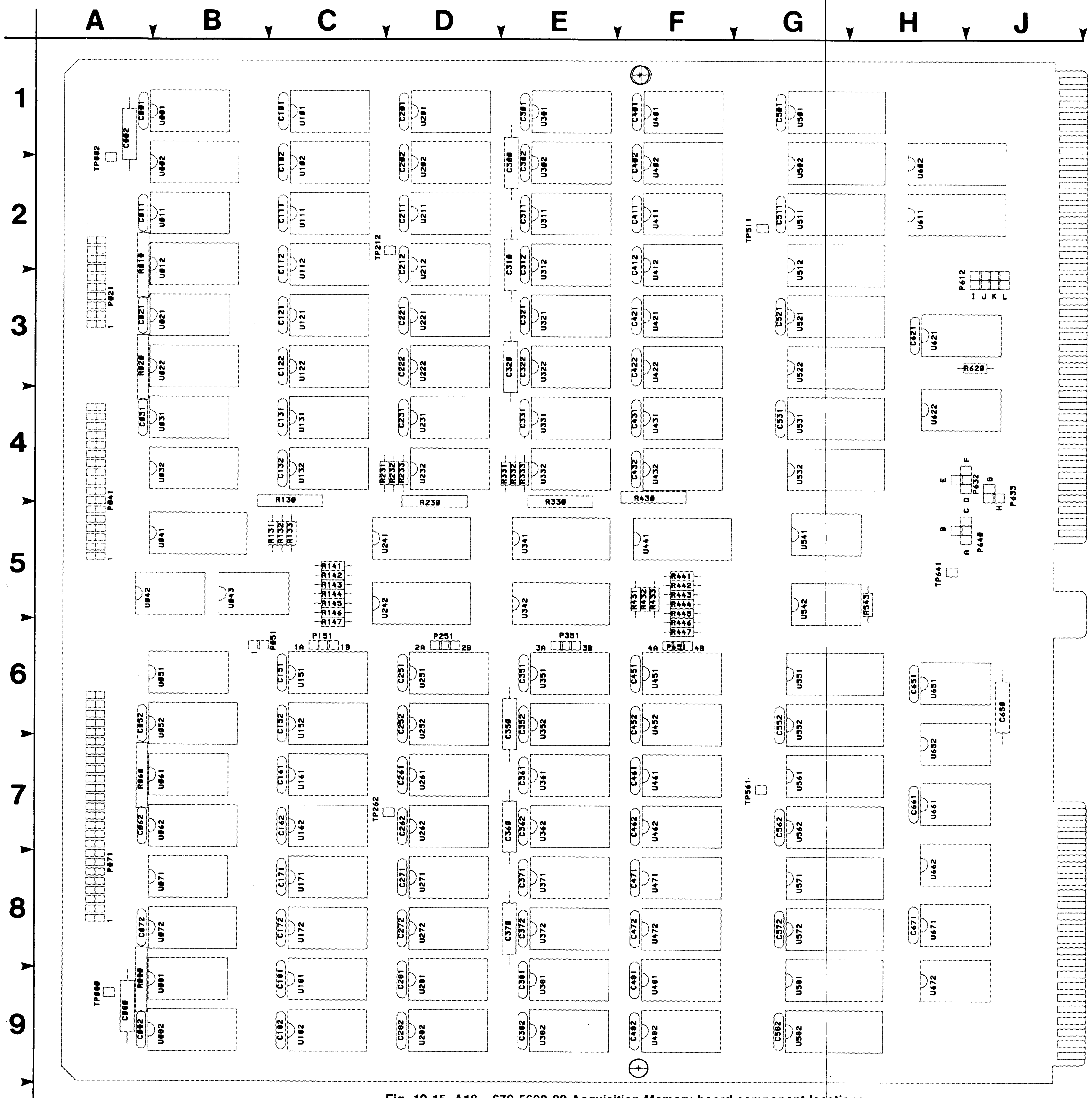
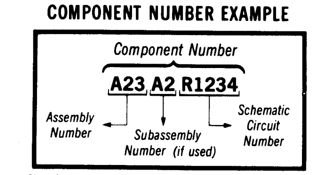


Fig. 10-15. A18—670-5692-00 Acquisition Memory board component locations.

2921-64

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

DECODER AND DATA OUTPUT DIAGRAM ⟨9⟩ a

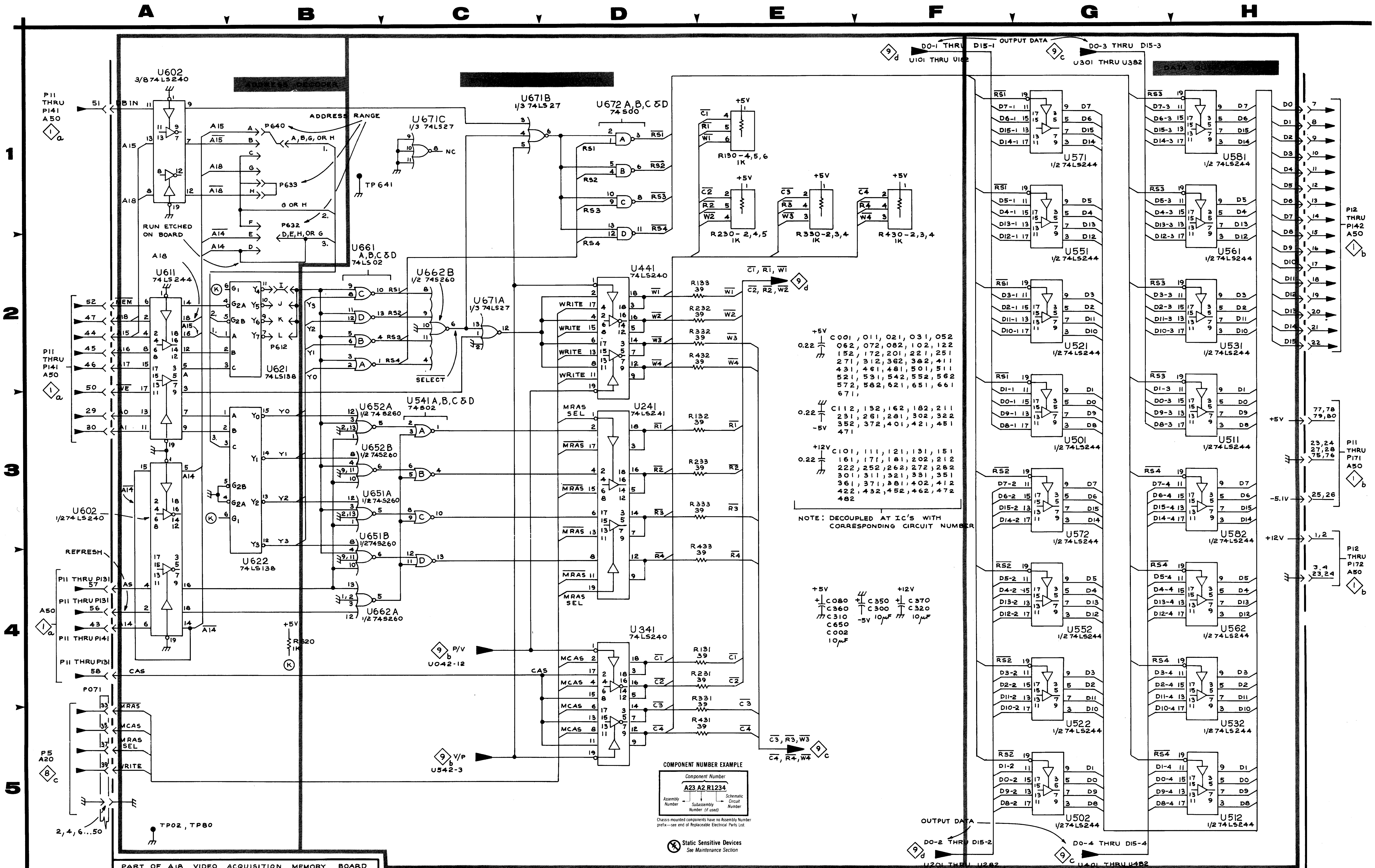
ASSEMBLY A18 *Partial A18 also shown on diagrams 9b, 9c and 9d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	E2	A1
C2	E4	A1
C11	F2	A2
C21	F2	A3
C31	F2	A4
C52	F2	A6
C62	E2	A7
C72	F2	A8
C80	E4	A9
C82	F2	A9
C101	E3	C1
C102	F2	C2
C111	F3	C2
C112	E3	C2
C121	F3	C3
C122	F2	C3
C131	F3	C4
C132	F3	C4
C151	F3	C6
C152	E2	C6
C161	E3	C7
C162	F3	C7
C171	F3	C8
C172	F2	C8
C181	F3	C9
C182	F3	C9
C201	F2	D1
C202	F3	D2
C211	F3	D2
C212	F3	D2
C221	F2	D3
C222	E3	D3
C231	E3	D4
C251	F2	D6
C252	F3	D6
C261	F3	D7
C262	F3	D7
C271	E2	C8
C272	F3	C8
C281	F3	D9
C282	F3	D9
C300	F4	E2
C301	E3	E1
C302	F3	E2
C310	E4	E2
C311	F3	E2
C312	F2	E2
C320	F4	E3
C321	F3	E3
C322	F3	E3
C331	F3	E4
C350	F4	E6
C351	F3	E6
C352	E3	E6
C360	E4	E7
C361	E3	E7
C362	F2	E7

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C370	F4	E8
C371	F3	E8
C372	F3	E8
C381	F3	E9
C382	F2	E9
C401	F3	F1
C402	F3	F2
C411	F2	F2
C412	F3	F2
C421	F3	F3
C422	E3	F3
C431	E2	F4
C432	F3	F4
C451	F3	F6
C452	F3	F6
C461	F2	F7
C462	F3	F7
C471	E3	F8
C472	F3	F8
C481	F2	F9
C482	E3	F9
C501	F2	G1
C511	F2	G2
C521	E2	G3
C531	F2	G4
C552	F2	G6
C562	F2	G7
C572	E2	G8
C582	F2	G9
C621	F2	H3
C650	E4	J6
C651	F2	H6
C661	F2	H7
C671	E2	H8
P612	B2	H3
P632	B2	J4
P633	B1	J4
P640	B1	J5
R130-4	E1	C4
R130-5	E1	C4
R130-6	E1	C4
R131	E4	C5
R132	E3	C5
R133	E2	C5
R230-2	E1	D4
R230-4	E1	D4
R230-5	E1	D4
R231	E4	C4
R232	E2	D4
R233	E3	D4
R330-2	E1	E5
R330-3	E1	E5
R330-4	E1	E5
R331	E5	E4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R332	E2	E4
R333	E3	E4
R430-2	F1	F4
R430-3	F1	F4
R430-4	F1	F4
R431	E5	F5
R432	E2	F5
R433	E4	F5
R620	B4	J3
TP641	B1	H5
U241	D3	C5
U341	D4	E5
U441	D2	F5
U501	G3	G1
U502	G5	G2
U511	H3	G2
U512	H5	G2
U521	G2	G3
U522	G5	G3
U531	H2	G4
U532	H5	G4
U541A	C3	G5
U541B	C3	G5
U541C	C3	G5
U541D	C4	G5
U551	G2	G6
U552	G4	G6
U561	H2	G7
U562	H4	G7
U571	G1	G8
U572	G3	G8
U581	H1	G9
U582	H3	G9
U602	A1	H2
U602	A3	H2
U611	A2	H2
U621	B2	H3
U622	B3	H4
U651A	B3	H6
U651B	B3	H6
U652A	B3	H7
U652B	B3	H7
U661A	B2	H7
U661B	B2	H7
U661C	B2	H7
U661D	B2	H7
U662A	B4	H8
U662B	C2	H8
U671A	C2	H8
U671B	D1	H8
U671C	C1	H8
U672A	D1	H9
U672B	D1	H9
U672C	D1	H9
U672D	D1	H9

DECODER & DATA OUT
P/O A18 670-5692-00



1980

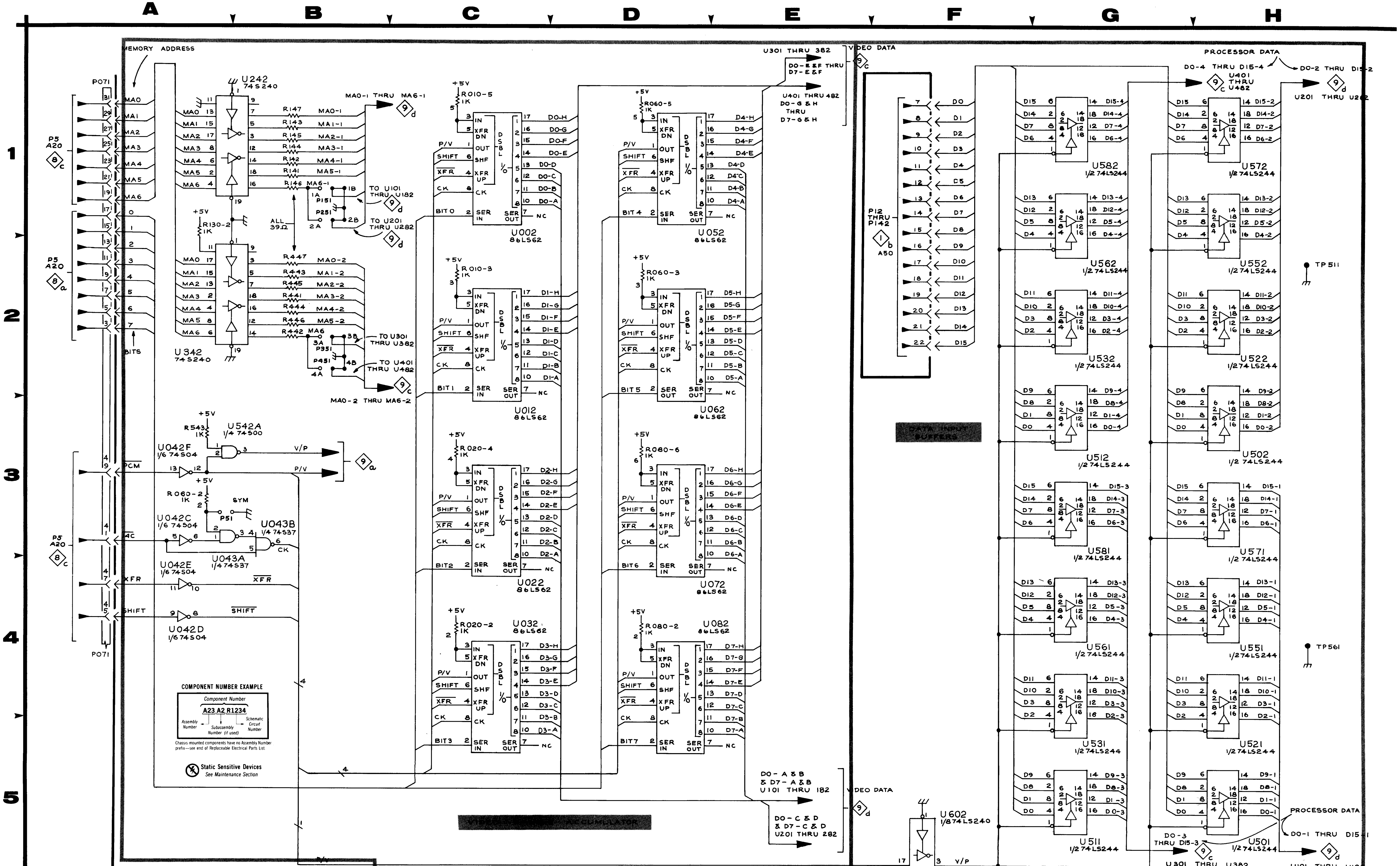
2921-133

ADDRESS DECODER AND DATA OUTPUT
670-5692-00

DATA INPUT AND BUFFER MEMORY DIAGRAM ⟨9⟩ b

ASSEMBLY A18 *Partial A18 also shown on diagrams 9a, 9c and 9d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P71	A1	A8	U12	C2	B2
P71	A4	A8	U22	C3	B3
			U32	C4	B4
R10-3	C2	A2	U42C	A3	A5
R10-5	C1	A2	U42D	A5	A5
R20-2	C4	A3	U42E	A4	A5
R20-4	C3	A3	U42F	A3	A5
R60-2	A3	A7	U43A	B3	B5
R60-3	D2	A7	U43B	B3	B5
R60-5	D1	A7	U52	D1	B6
R80-2	D4	A9	U62	D2	B7
R80-6	D3	A9	U72	D3	B8
R130-2	A1	C4	U82	D4	B9
R141	B1	C5	U242	B1	C5
R142	B1	C5	U342	A2	E5
R143	B1	C5	U501	H5	G1
R144	B1	C5	U502	H3	G2
R145	B1	C5	U511	G5	G2
R146	B1	C5	U512	G3	G2
R147	B1	C6	U521	H5	G3
R441	B2	F5	U522	H2	G3
R442	B2	F5	U531	G5	G4
R443	B2	F5	U532	G2	G4
R444	B2	F5	U542A	B3	G5
R445	B2	F5	U551	H4	G6
R446	B2	F6	U552	H2	G6
R447	B2	F6	U561	G4	G7
R543	A3	H5	U562	G2	G7
			U571	H3	G8
TP511	H2	G2	U572	H1	G8
TP561	H4	G7	U581	G3	G9
			U582	G1	G9
U2	C1	B2	U602	F5	H2



PART OF A18 VIDEO ACQUISITION MEMORY BOARD

1980

2921-134

DATA INPUT AND VIDEO SAMPLE ACCUMULATOR

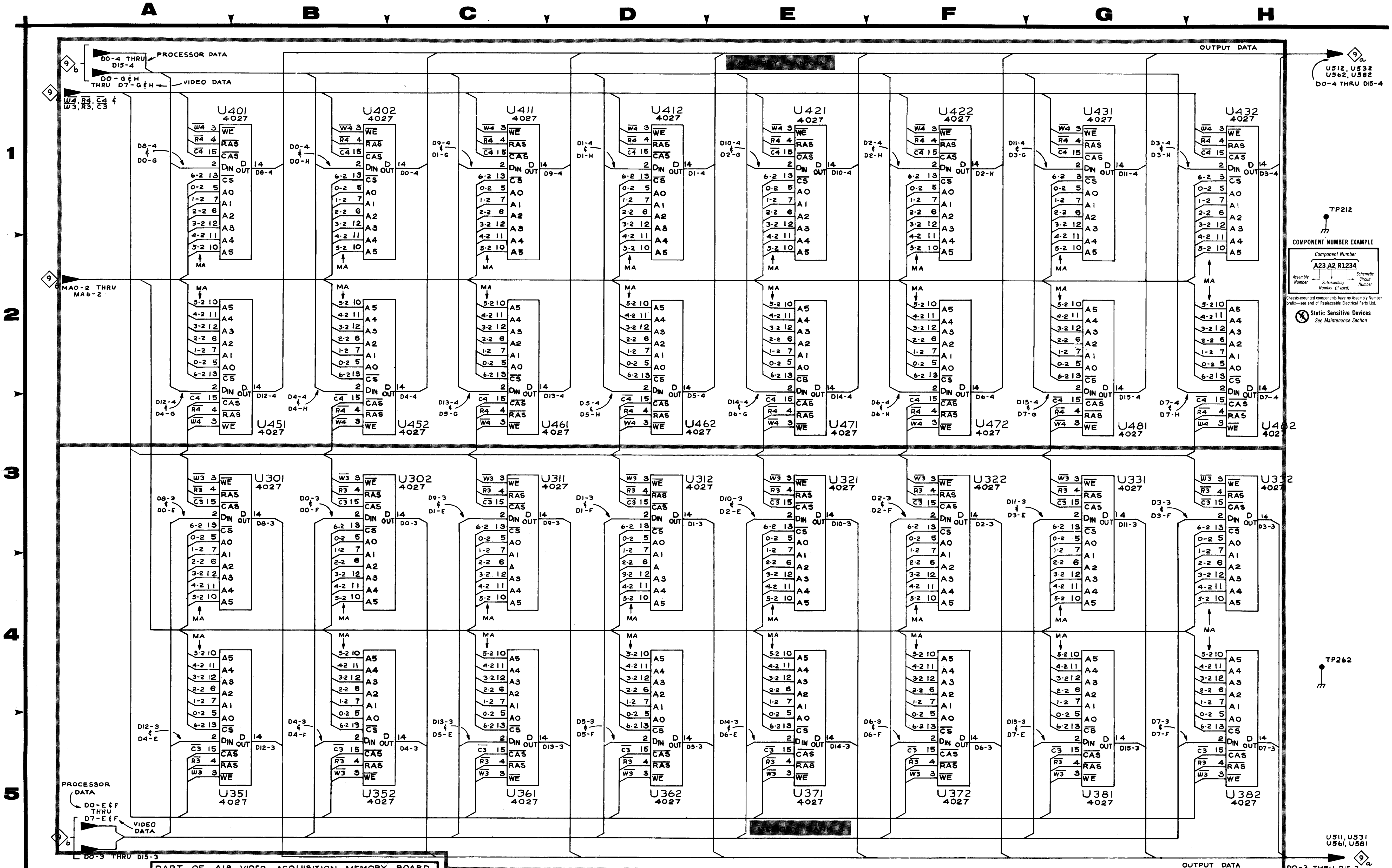
670-5692-00

DATA IN & VID. SAMP. ACCUM.
P/O A18 670-5692-00

ACQUISITION MEMORY (1) DIAGRAM <9> c

ASSEMBLY A18 *Partial A18 also shown on diagrams 9a, 9b and 9d*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
TP00212	H1	C2	U382	H5	E9
TP262	H4	C7	U401	B1	F1
			U402	B1	F2
U301	B3	E1	U411	C1	F2
U302	C3	E2	U412	D1	F2
U311	C3	E2	U421	E1	F3
U312	D3	E2	U422	F1	F3
U321	E3	E3	U431	G1	F4
U322	F3	E3	U432	H1	F4
U331	G3	E4	U451	B3	F6
U332	H3	E4	U452	C3	F6
U351	B5	E6	U461	C3	F7
U352	B5	E6	U462	D3	F7
U361	C5	E7	U471	E3	F8
U362	D5	E7	U472	F3	F8
U371	E5	E8	U481	G3	F9
U372	F5	E8	U482	H3	F9
U381	G5	E9			



PART OF A18 VIDEO ACQUISITION MEMORY BOARD

1980

2921-135

AM BANKS 3 & 4

670-5692-00

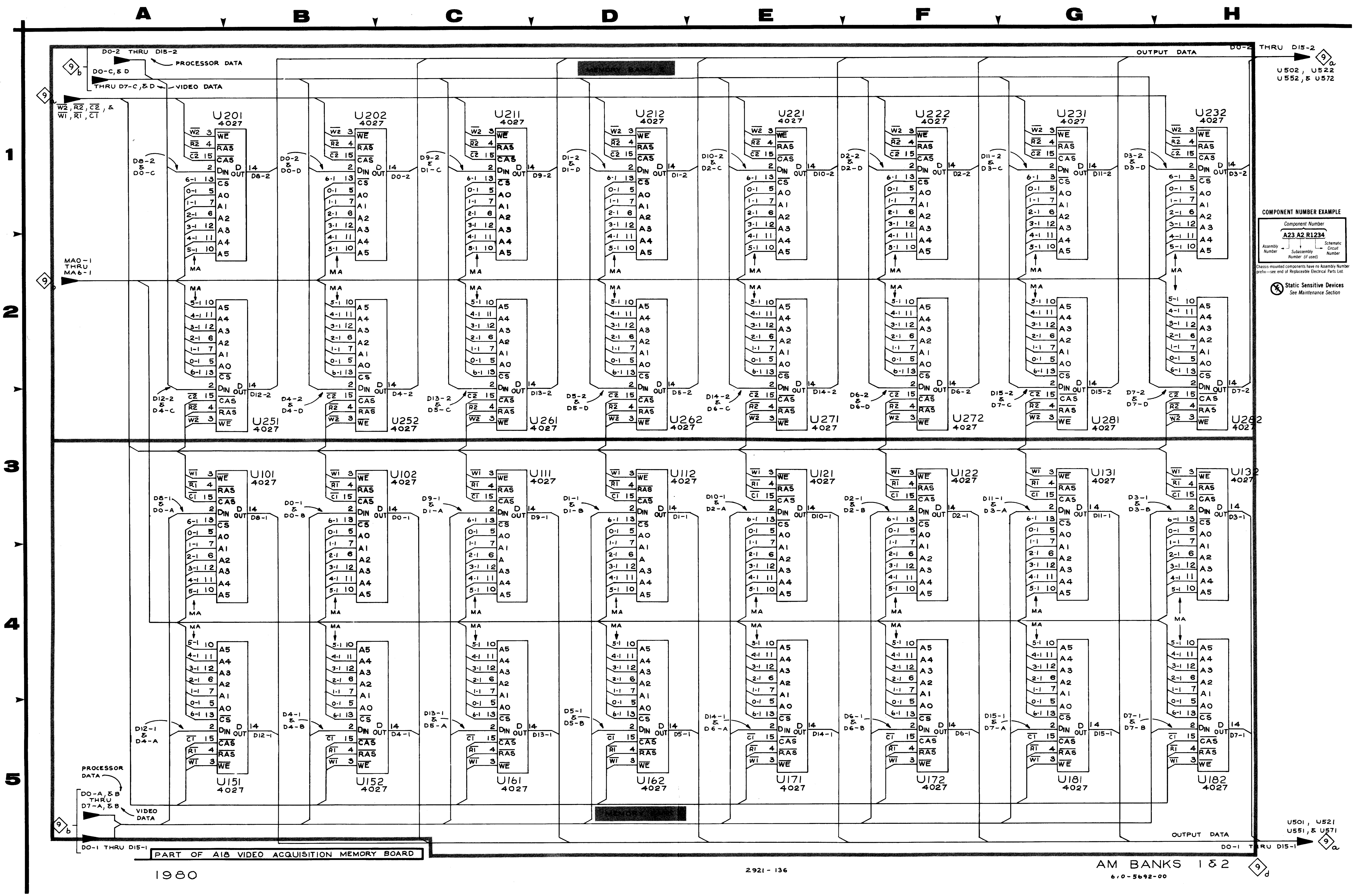
AM BANKS 3 & 4
P/O A18 670-5692-00

ACQUISITION MEMORY (2) DIAGRAM 9d

ASSEMBLY A18 *Partial A18 also shown on diagrams 9a, 9b and 9c*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P21		A3	U131	G3	C4
P41		A5	U132	H3	C4
P51		C6	U151	B5	C6
P151		C6	U152	B5	C6
P251		D6	U161	C5	C7
P351		E6	U162	D5	C7
P451		F6	U171	E5	C8
			U172	F5	C8
TP2		A2	U181	G5	C9
TP80		A9	U182	H5	C9
			U201	B1	D1
U1		B1	U202	B1	D2
U11		B2	U211	C1	D2
U21		B3	U212	D1	D2
U31		B4	U221	E1	D3
U41		B5	U222	F1	D3
U51		B6	U231	G1	D4
U61		B7	U232	H1	D4
U71		B8	U251	B3	D6
U81		B9	U252	C3	D6
U101	B3	C1	U261	C3	D7
U102	C3	C2	U262	D3	D7
U111	C3	C2	U271	E3	C8
U112	D3	C2	U272	F3	C8
U121	E3	C3	U281	G3	D9
U122	F3	C3	U282	H3	D9

A18 ACQUISITION MEMORY
670-5692-00 PARTS LOCATION TABLE



AM BANKS 1 & 2
P/O A18 670-5692-00

9 d

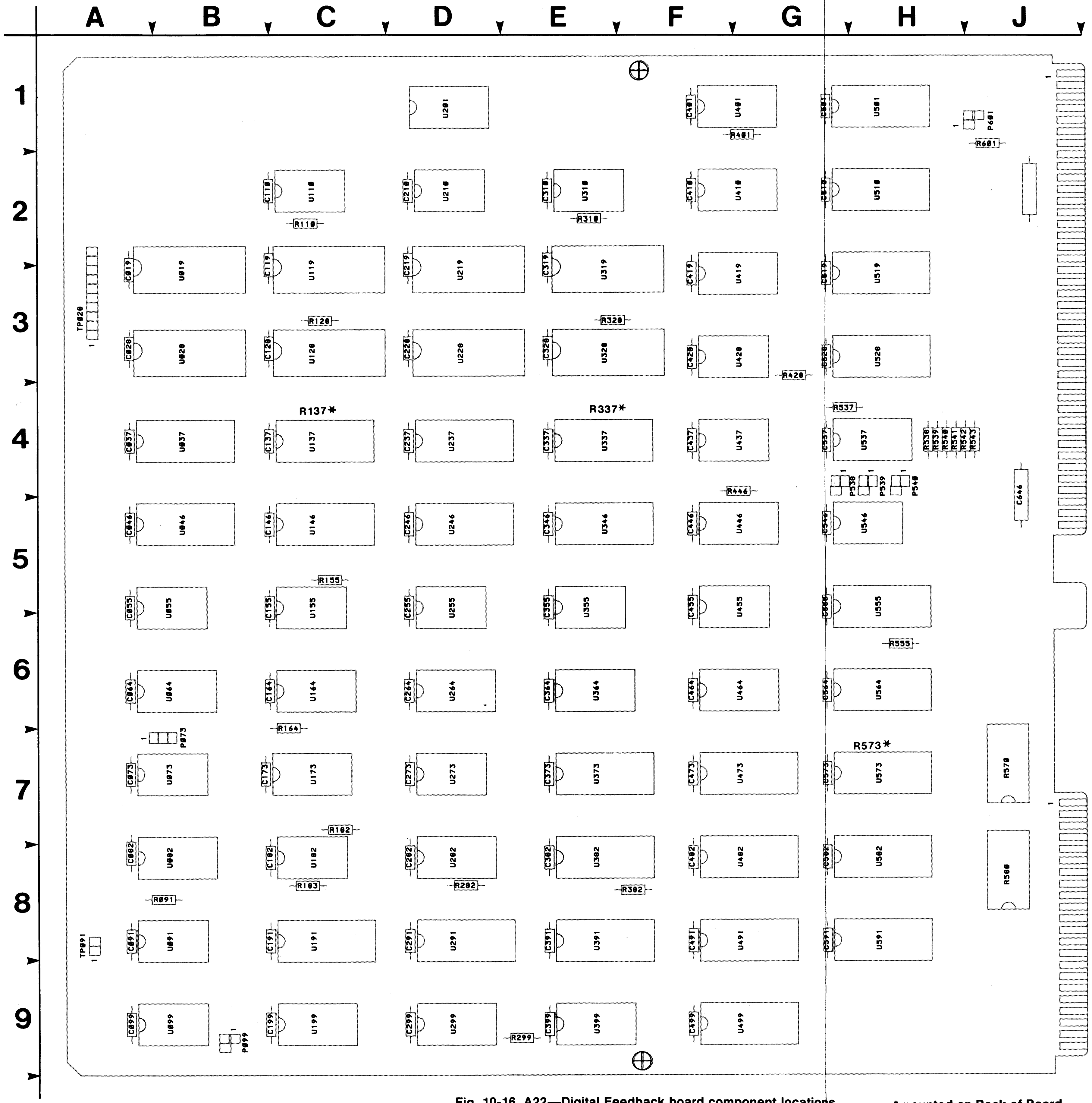


Fig. 10-16. A22—Digital Feedback board component locations.

*mounted on Back of Board

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number: A23 A2 R1234 — Assembly Number; Subassembly Number (if used); Schematic Circuit Number

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

2921-65

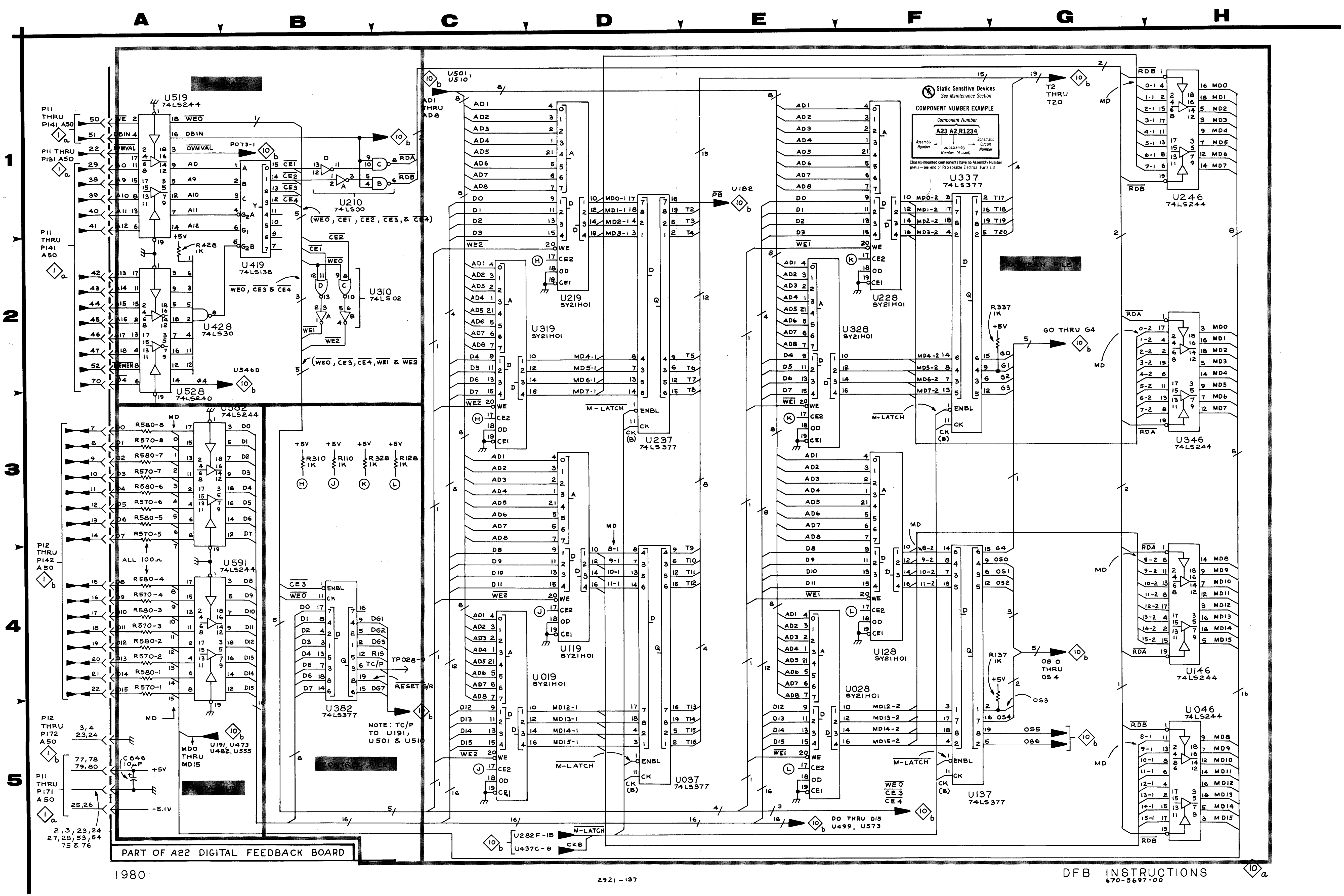
A22 DIGITAL FEEDBACK BD. & PARTS LOCATION TABLE

DFB INSTRUCTIONS DIAGRAM ⟨10⟩ a

ASSEMBLY A22 *Partial A22 also shown on diagrams 10b*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C646	A5	J4	R580-4	A4	J8	U219	D2	D3
			R580-5	A3	J8	U228	F2	D3
R110	B3	C2	R580-6	A3	J8	U237	D3	D4
R128	C3	C3	R580-7	A3	J8	U246	H1	D5
R137	G4	C4*	R580-8	A3	J8	U310A	B2	E1
R310	B3	E1				U310B	B2	E1
R328	B3	E3	TP28I	C4	A3	U310C	B2	E1
R337	G2	E4*				U310D	B2	E1
R428	A2	G3	U19	C4	B3	U319	C2	E3
R570-1	A4	J7	U28	E4	B3	U328	E2	E3
R570-2	A4	J7	U37	D5	B4	U337	F1	E4
R570-3	A4	J7	U46	H5	B5	U346	H3	E5
R570-4	A4	J7	U119	D4	C2	U382	B4	E8
R570-5	A3	J7	U128	F4	C3	U419	B2	G3
R570-6	A3	J7	U137	F5	C4	U428	A2	G3
R570-7	A3	J7	U146	H4	C5	U519	A1	H3
R570-8	A3	J7	U210A	B1	D2	U528	A2	H3
R580-1	A4	J8	U210B	C1	D2	U582	A3	H8
R580-2	A4	J8	U210C	C1	D2	U591	A4	H8
R580-3	A4	J8	U210D	B1	D2			

***mounted on Back of Board**

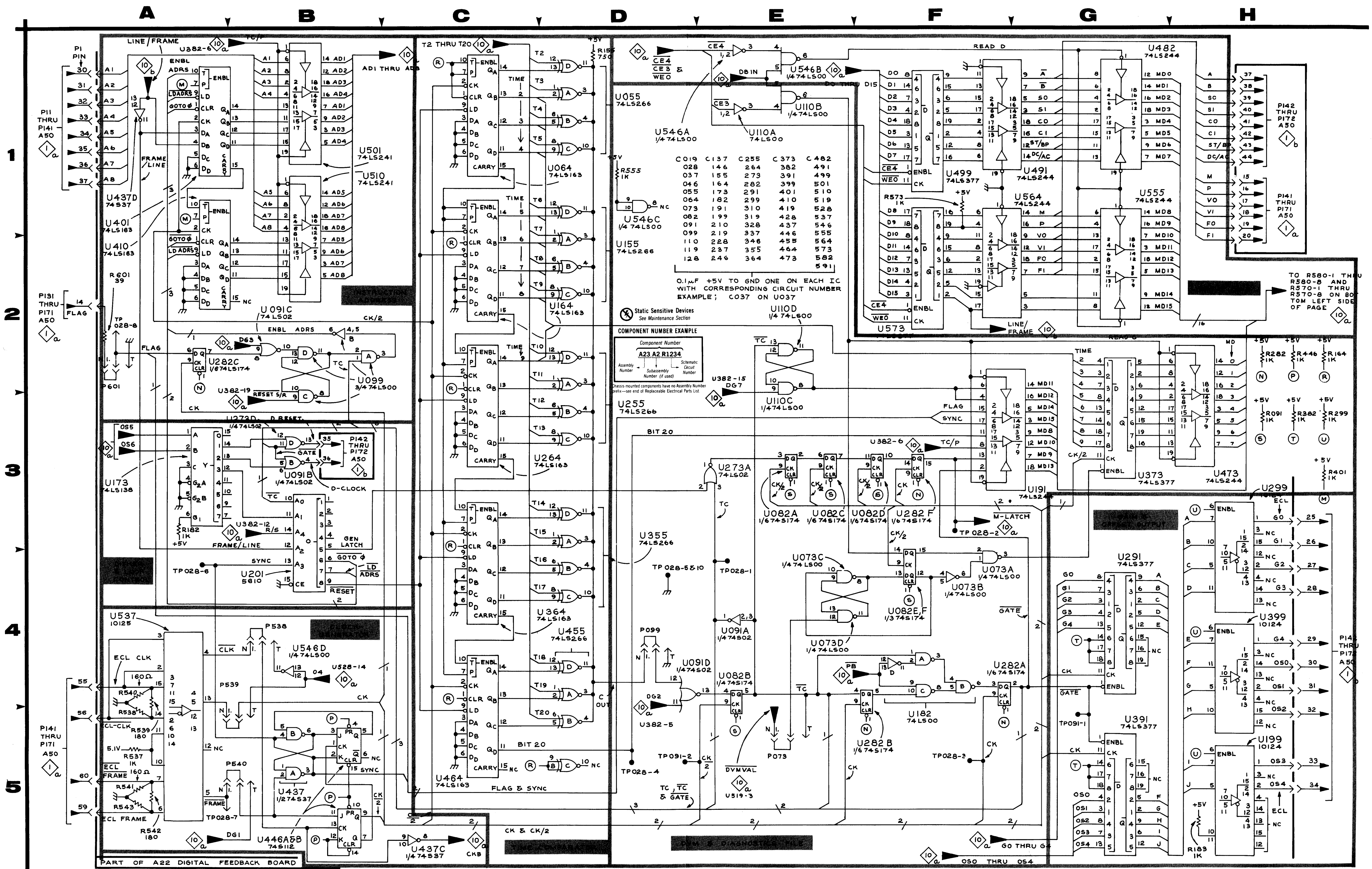

PART OF A22 DIGITAL FEEDBACK BOARD
DECODER
DATA BUS
CONTROL FILE
PATTERN FILE
U519 74LS244
U528 74LS240
U419 74LS138
U428 74LS30
U210 74LS00
U310 74LS02
U582 74LS244
U591 74LS244
U382 74LS377
U219 SY21H01
U319 SY21H01
U119 SY21H01
U019 SY21H01
U237 74LS377
U037 74LS377
U228 SY21H01
U328 SY21H01
U128 SY21H01
U028 SY21H01
U337 74LS377
U137 74LS377
U246 74LS244
U346 74LS244
U146 74LS244
U046 74LS244
Static Sensitive Devices
See Maintenance Section
COMPONENT NUMBER EXAMPLE
Component Number
A23 A2 R1234
Assembly Number
Subassembly Number (if used)
Schematic Circuit Number
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List
NOTE: TC/P TO U191, U501 & U510
DO THRU D15 U499, U573
GO THRU G4
OS0 THRU OS4
T2 THRU T20
MD0 THRU MD15
U191, U473 U482, U555
ALL 100Ω
A
B
C
D
E
F
G
H
1
2
3
4
5

DFB OUTPUT CONTROL DIAGRAM 10 b

ASSEMBLY A22 *Partial A22 also shown on diagrams 10a*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C19	D1	A3	P73	E5	B7	U110C	E2	C2
C28	D1	A3	P99	D4	B9	U110D	E2	C2
C37	D1	A4	P538	B4	H4	U155A	D2	C5
C46	D1	A5	P539	B4	H4	U155B	D2	C5
C55	D1	A5	P540	B5	H4	U155C	D2	C5
C64	D1	A6	P601	A2	J1	U155D	D1	C5
C73	D1	A7				U164	C2	C6
C82	D1	A8	R91	H3	B8	U173	A3	C7
C91	D1	A8	R155	D1	C5	U182A	F4	C8
C99	D1	A9	R164	H2	C6	U182B	F4	C8
C110	D2	C2	R182	A3	C7	U182C	F4	C8
C119	D2	C2	R183	H5	C8	U182D	F4	C8
C128	D2	C3	R282	H2	D8	U191	G3	C8
C137	E1	C4	R299	H3	E9	U199	H5	C9
C146	E1	C5	R382	H3	F8	U201	B4	D1
C155	E1	C5	R401	H2	G1	U255A	D2	D5
C164	E1	C6	R446	H2	G4	U255B	D3	D5
C173	E1	B7	R537	A5	G4	U255C	D3	D5
C182	E1	C8	R538	A5	H4	U255D	D2	D5
C191	E1	C8	R539	A5	H4	U264	C3	D6
C199	E1	C9	R540	A4	H4	U273A	E3	D7
C210	E1	D2	R541	A5	H4	U273D	B3	D7
C219	E1	D3	R542	A5	H4	U282A	F4	D8
C228	E2	D3	R543	A5	J4	U282B	F5	D8
C237	E2	D4	R555	D1	H6	U282C	A2	D8
C246	E2	D5	R573	F1	H7*	U282F	F3	D8
C255	E1	D5	R601	A2	J1	U291	G4	D8
C264	E1	D6				U299	H3	D9
C273	E1	D7	TP28A	E4	A3	U355A	D3	E5
C282	E1	D8	TP28A	F3	A3	U355B	D4	E5
C291	E1	D8	TP28C	F5	A3	U355C	D4	E5
C299	E1	D9	TP28D	D5	A3	U355D	D3	E5
C310	E1	E1	TP28E	D4	A3	U364	C4	E6
C319	E1	E3	TP28F	A4	A3	U373	G3	E7
C328	E1	E3	TP28G	A5	A3	U391	G5	E8
C337	E1	E4	TP28H	A2	A3	U399	H4	E9
C346	E2	E5	TP28I	D4	A3	U401	A1	G1
C355	E2	E5	TP28J	D4	A3	U410	A2	G2
C364	E2	E6	TP91A	G5	A8	U437A	B5	G4
C373	E1	E7	TP91B	D5	A8	U437B	B5	G4
C382	E1	E8				U437C	C5	G4
C391	E1	E8	U55A	D1	B5	U437	A1	G4
C399	E1	E9	U55B	D1	B5	U446A	B5	G5
C401	E1	F1	U55C	D1	B5	U446B	B5	G5
C410	E1	F2	U55D	D1	B5	U455A	D4	G5
C419	E1	F3	U64	C1	B6	U455B	D5	G5
C428	E1	F3	U73A	F4	B7	U455C	D5	G5
C437	E1	F4	U73B	F4	B7	U455D	D4	G5
C446	E1	F5	U73C	E4	B7	U464	C5	G6
C455	E2	F5	U73D	E4	B7	U473	H3	G7
C464	E2	F6	U82A	E3	B8	U482	G1	G8
C473	E2	F7	U82B	E4	B8	U491	G1	G8
C482	E1	G8	U82C	E3	B8	U499	F1	G9
C491	E1	F8	U82D	F3	B8	U501	B1	H1
C499	E1	F9	U82E	F4	B8	U510	B1	H2
C501	E1	G1	U82F	F4	B8	U537	A4	H4
C510	E1	G2	U91A	E4	B8	U546A	E1	H5
C519	E1	G3	U91B	B3	B8	U546B	E1	H5
C528	E1	G3	U91C	B2	B8	U546C	D1	H5
C537	E1	G4	U91D	D4	B8	U546D	B4	H5
C546	E1	G5	U99A	B2	B9	U555	G2	H5
C555	E1	G5	U99B	B2	B9	U564	G1	H6
C564	E2	G6	U99C	B3	B9	U573	F2	H7
C573	E2	G7	U99D	B2	B9			
C582	E2	G8	U110A	E1	C2			
C591	E2	G8	U110B	E1	C2			

***mounted on Back of Board**



1980

2921-138

DFB OUTPUT CONTROL ⟨10⟩b

670-5697-00

DFB OUTPUT CONTROL
P/O A22 670-5697-00

⟨10⟩b

A60A1 INVERTER BOARD
670-6046-01 & PARTS LOCATION TABLE

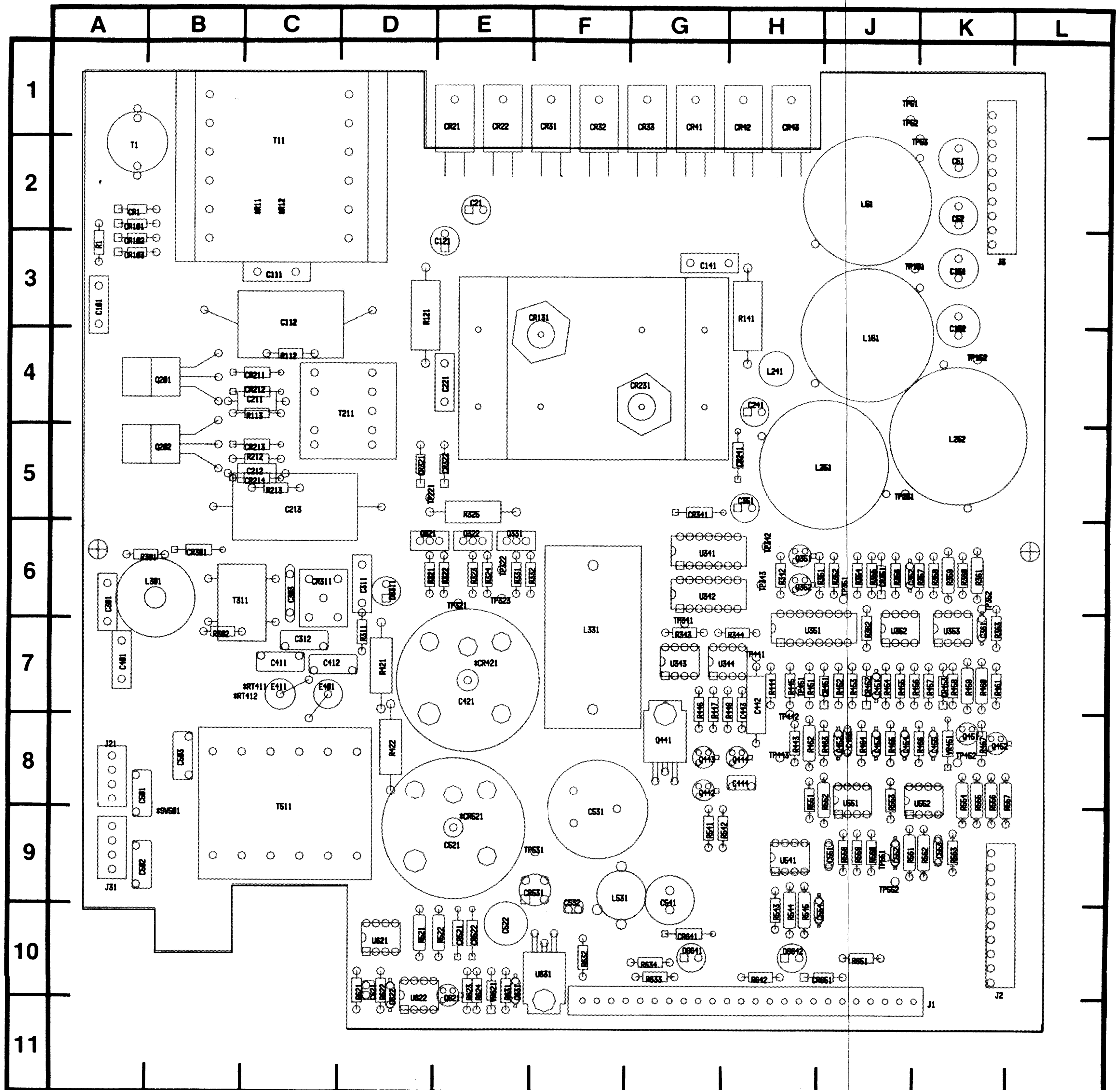


Fig. 10-17. A60A1—670-6046-01 Inverter board component locations.

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number
A23 A2 R1234
Assembly Number — *Subassembly Number (if used)* — *Schematic Circuit Number*

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

2921-66

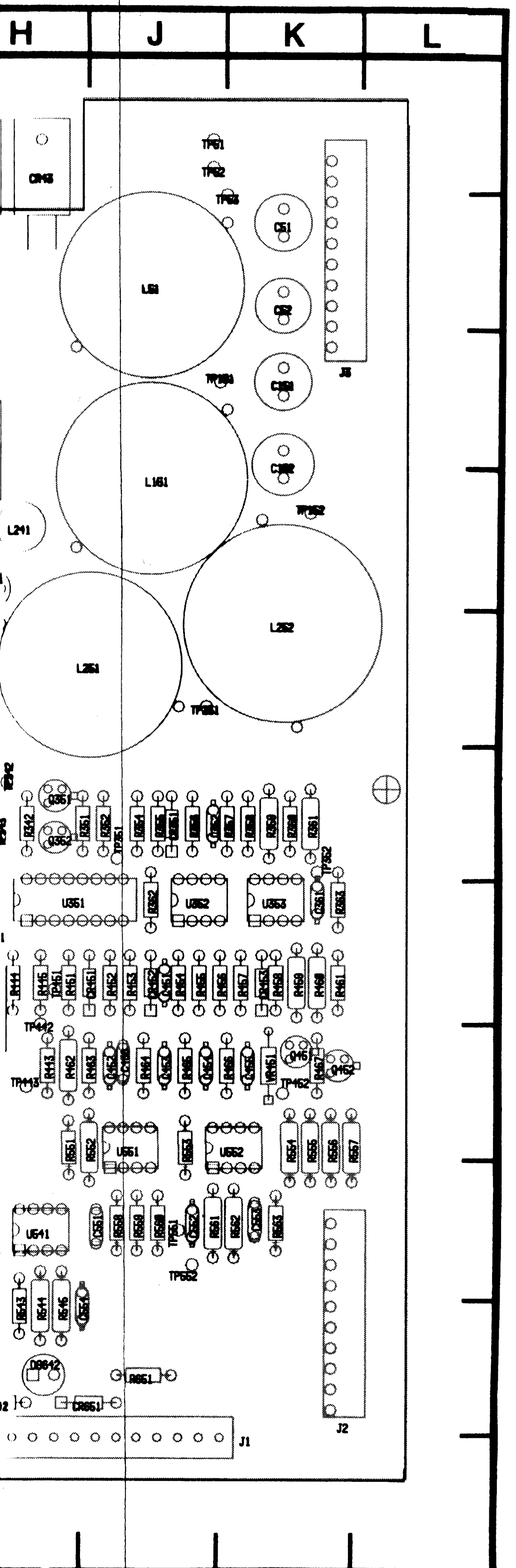
POWER SUP

ASSEMBLY A60A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRC NUM
C21	G1	E2	CR43	F2	H1	Q32
C51	G1	K3	CR101	F1	A2	Q32
C52	G1	K3	CR102	F1	A3	Q33
C101	E3	A3	CR103	F1	A3	Q35
C112	E2	C3	CR131	F2	F3	Q35
C121	G1	E3	CR211	E3	C4	Q44
C141	F3	G3	CR212	E3	C4	Q44
C151	G2	K3	CR212	E3	C4	Q44
C152	G2	K4	CR213	E3	C5	Q44
C211	E3	C4	CR214	E3	C5	
						Q45
C212	E1	C5	CR231	F3	G4	Q45
C213	E1	C5	CR241	D2	H5	Q62
C221	F2	E4	CR301	E1	B6	
C241	D2	H4	CR311	C2	B6	R1
C301	E1	A6	CR312	B2	B6	R11
C303	D2	C5	CR313	B2	B6	R12
C311	C2	D6	CR314	B2	B6	R11
C312	B2	C7	CR321	D3	D4	R12
C351	D2	H5	CR322	D3	E5	R14
C352	A3	J6	CR341	D2	G5	R21
C361	B5	K7	CR351	A3	J6	R21
C401	D2	A7	CR451	A4	J7	R30
C411	B2	C7	CR452	B4	J7	R30
C412	B2	C7	CR453	A5	K7	R31
C421	C2	E7	CR521	C1	E10	R32
C442	D5	H7	CR522	C1	E10	R32
C443	C4	H7	CR531	C1	F9	R32
C444	C5	H8	CR641	H3	G10	R32
C451	B4	J7	CR651	B5	J10	R32
C452	E5	J8				R33
C453	D5	J8	DS311	C2	D6	R33
C454	D4	J8	DS641	G2	G10	R34
C455	A1	K8	DS642	A1	H10	R34
C456	E4	J8				R34
C501	F1	B8	E411	B1	B7	R35
C502	F1	B9				R35
C503	B2	B8	J1	A4	K10	R35
C521	C2	E9	J1	B5	K10	R35
C522	D1	E10	J1	G1	K10	R35
C531	F3	F9	J1	H5	K10	R35
C532	A4	F9	J2	A4	K10	R35
C541	G3	G9	J2	G4	K10	R35
C551	F5	J9	J2	H2	K10	R35
C552	F3	J9	J3	G2	K3	R35
C553	E4	K9	J21	G1	A8	R36
C554	G3	J10	J31	G1	A9	R36
C621	D1	D9				R36
C622	D1	D9	L51	F1	J2	R36
C631	D1	E10	L151	F1	J4	R40
			L241	D2	H4	R42
CR1	F1	A2	L251	F2	J4	R42
CR21	F1	E1	L252	F2	K5	R44
CR22	F2	E1	L301	E2	B6	R44
CR31	F1	F1	L331	F3	F7	R44
CR32	F1	F1	L531	G2	F9	R44
CR33	F2	G1				R44
CR41	F2	G1	Q201	E3	B4	R44
CR42	F2	H1	Q202	E3	B5	R45

CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRC NUM
F1001	A2	CHASSIS	FL1001	A2	CHASSIS	Q100



cations.

POWER SUPPLY DIAGRAM ⟨11⟩ a

ASSEMBLY A60A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C21	G1	E2
C51	G1	K3
C52	G1	K3
C101	E3	A3
C112	E2	C3
C121	G1	E3
C141	F3	G3
C151	G2	K3
C152	G2	K4
C211	E3	C4
C212	E1	C5
C213	E1	C5
C221	F2	E4
C241	D2	H4
C301	E1	A6
C303	D2	C5
C311	C2	D6
C312	B2	C7
C351	D2	H5
C352	A3	J6
C361	B5	K7
C401	D2	A7
C411	B2	C7
C412	B2	C7
C421	C2	E7
C442	D5	H7
C443	C4	H7
C444	C5	H8
C451	B4	J7
C452	E5	J8
C453	D5	J8
C454	D4	J8
C455	A1	K8
C456	E4	J8
C501	F1	B8
C502	F1	B9
C503	B2	B8
C521	C2	E9
C522	D1	E10
C531	F3	F9
C532	A4	F9
C541	G3	G9
C551	F5	J9
C552	F3	J9
C553	E4	K9
C554	G3	J10
C621	D1	D9
C622	D1	D9
C631	D1	E10
CR1	F1	A2
CR21	F1	E1
CR22	F2	E1
CR31	F1	F1
CR32	F1	F1
CR33	F2	G1
CR41	F2	G1
CR42	F2	H1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
CR43	F2	H1
CR101	F1	A2
CR102	F1	A3
CR103	F1	A3
CR131	F2	F3
CR211	E3	C4
CR212	E3	C4
CR212	E3	C4
CR213	E3	C5
CR214	E3	C5
CR231	F3	G4
CR241	D2	H5
CR301	E1	B6
CR311	C2	B6
CR312	B2	B6
CR313	B2	B6
CR314	B2	B6
CR321	D3	D4
CR322	D3	E5
CR341	D2	G5
CR351	A3	J6
CR451	A4	J7
CR452	B4	J7
CR453	A5	K7
CR521	C1	E10
CR522	C1	E10
CR531	C1	F9
CR641	H3	G10
CR651	B5	J10
DS311	C2	D6
DS641	G2	G10
DS642	A1	H10
E411	B1	B7
J1	A4	K10
J1	B5	K10
J1	G1	K10
J1	H5	K10
J2	A4	K10
J2	G4	K10
J2	H2	K10
J3	G2	K3
J21	G1	A8
J31	G1	A9
L51	F1	J2
L151	F1	J4
L241	D2	H4
L251	F2	J4
L252	F2	K5
L301	E2	B6
L331	F3	F7
L531	G2	F9
Q201	E3	B4
Q202	E3	B5

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
Q321	D3	D6
Q322	D3	E6
Q331	D3	E6
Q351	D4	H5
Q352	D4	H5
Q441	G3	G8
Q442	F3	G8
Q443	C5	H7
Q444	C4	H8
Q451	A5	K8
Q452	B5	K8
Q621	E1	E10
R1	E3	A3
R11	E1	C2
R12	E1	C2
R112	E2	C4
R121	F2	D3
R141	F3	H3
R212	E2	C5
R213	E1	C5
R301	E1	B6
R302	D2	B7
R311	C2	D7
R321	D3	D6
R322	D3	E6
R323	D3	E6
R324	D2	E6
R325	D2	E5
R331	D3	E6
R332	D3	E6
R342	D4	H5
R343	C3	G7
R344	C4	G8
R351B	A4	H5
R351	D4	H5
R352	A3	J6
R352	D4	J6
R354	A3	J6
R355	B3	J6
R356	A3	J6
R357	A3	K6
R358	A3	K6
R359	B3	K6
R360	B3	K6
R361	B3	K6
R362	B4	J7
R363	A5	K7
R401	B1	B7
R421	C2	D7
R422	C2	D8
R443	D4	H8
R444	A4	H7
R445	D4	H7
R446	C4	G7
R447	C4	G7
R448	C5	H7
R451	A4	H7

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R452	B4	J7
R453	B4	J7
R454	B4	J7
R455	A4	J7
R456	A5	J7
R457	A4	K7
R458	A5	K7
R459	B5	K7
R460	B5	K7
R461	B5	K7
R462	E4	H8
R463	E5	J8
R464	E4	J8
R465	E5	J8
R466	A1	K8
R467	B5	K8
R521	C1	D9
R522	C1	E10
R541	F2	G9
R542	F3	H9
R543	A1	H10
R544	G2	H10
R545	G3	H10
R551	F5	H8
R552	E5	J8
R553	D5	J8
R554	A5	K8
R555	A5	K8
R556	A5	K8
R557	A5	K8
R558	F5	J9
R559	F5	J9
R560	F4	J9
R561	H4	J9
R562	H4	K9
R563	D4	K9
R621	D1	D9
R622	D1	D9
R623	E4	E10
R624	A4	E10
R631	E1	E10
R632	A4	F10
R633	H3	G10
R634	G3	G10
R642	H5	H10
R651	B5	J10
RT411	B2	B7
RT412	B2	B7
S501	B1	B9
T1	F1	A2
T11	F1	C2
T211	D3	D4
T311	D3	B6
T511	C1	B8

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
TP51	G1	J1
TP52	G1	J1
TP53	G1	K2
TP151	G1	J3
TP152	G2	K4
TP221	D3	D4
TP251	G2	J5
TP321	D3	E6
TP322	D3	E6
TP323	D2	E6
TP341	C3	G7
TP342	B3	H5
TP343	B4	H5
TP351	A4	J6
TP352	B3	K6
TP441	D4	H7
TP442	E4	H8
TP443	D1	H8
TP451	B4	H7
TP452	A1	K8
TP531	D1	F9
TP551	F5	J9
TP552	A1	J9
U341A	D3	G6
U341B	D3	G6
U341C	D3	G6
U342A	C3	G6
U342B	C4	G6
U343A	C5	G7
U343A	C5	G7
U343B	C3	G7
U343B	C3	G7
U344A	C4	G7
U344A	C4	G7
U344B	B4	G7
U344B	B4	G7
U351A	C4	H7
U351C	B4	H7
U351D	A4	H7
U351E	D4	H7
U351F	B3	H7
U352A	B4	J7
U352B	A3	J7
U353A	B5	K7
U353B	B3	K7
U541	H3	H9
U551A	F4	J8
U551B	E5	J8
U552A	E4	K8
U552B	A5	K8
U621A	D1	D9
U621B	D1	D9
U622B	E1	D9
U631	D1	F10
VR451	A1	K8
VR621	E1	E10

CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
F1001	A2	CHASSIS
FL1001	A2	CHASSIS
Q1001	H3	CHASSIS
R1001	G5	CHASSIS
R1002	G4	CHASSIS
S1001	A1	CHASSIS

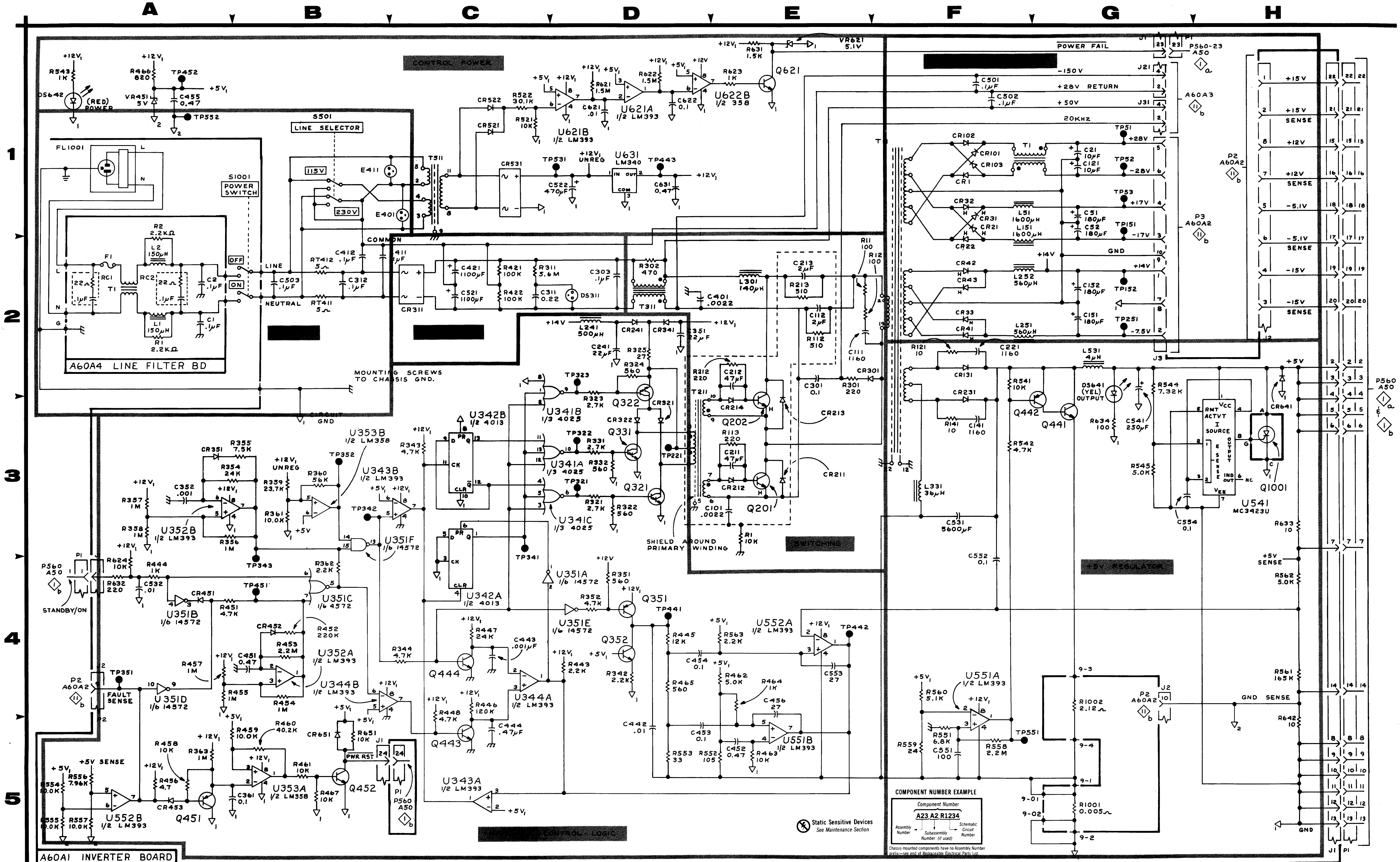
Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number
A23 A2 R1234
Assembly Number — *Subassembly Number (if used)* — *Schematic Circuit Number*

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

2921-66



1980

2921 - 139

INVERTER & +5V

INVERTER BOARD 670-6046-01

LINE FILTER BOARD 670-7444-00

INVERTER & +5V
A60A1 670-6046-01
A60A4 670-7444-00

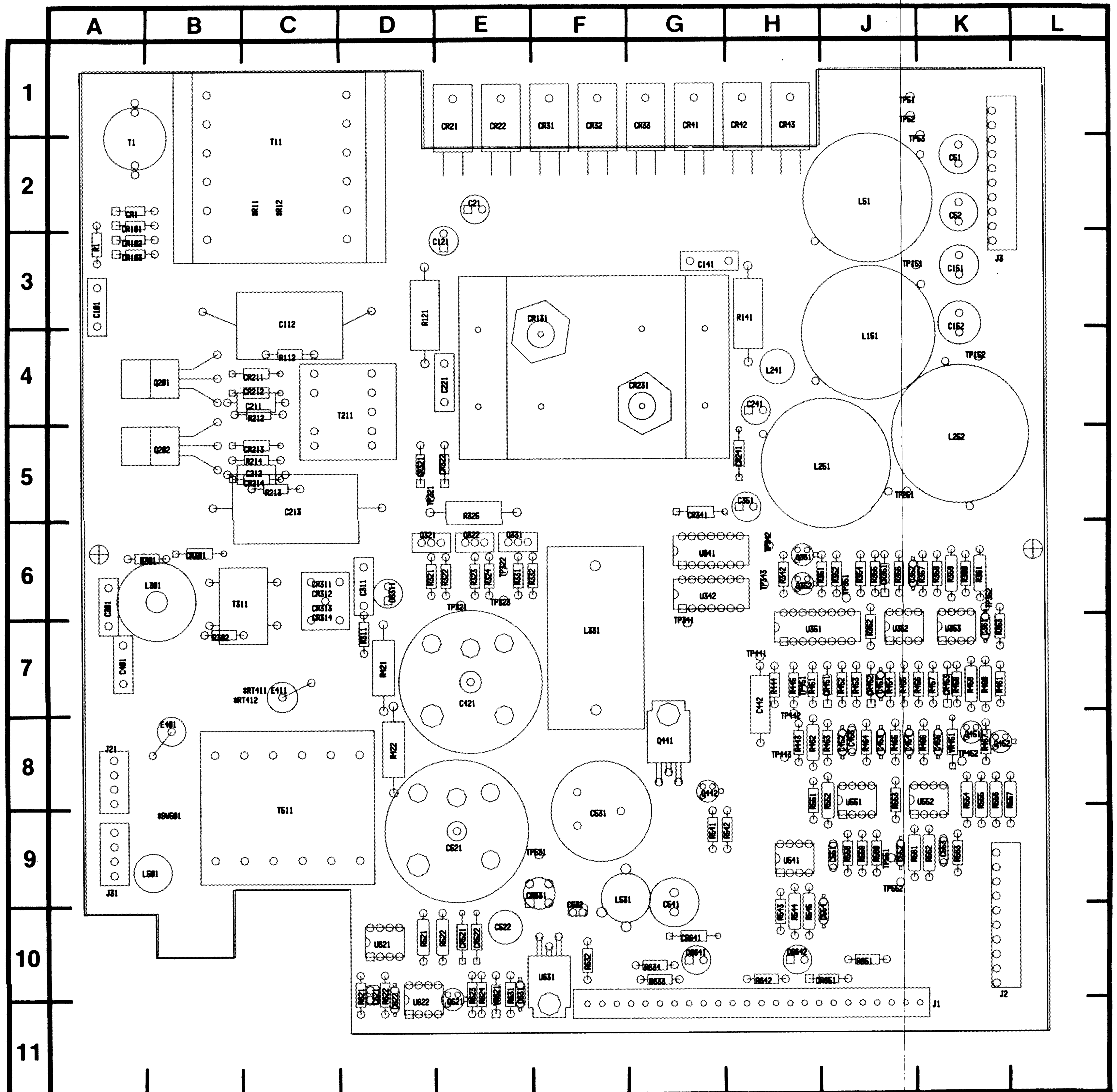


Fig. 10-18. A60A1—670-6046-00 Inverter board component locations.

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number
A23 A2 R1234
Assembly Number — *Subassembly Number (if used)* — *Schematic Circuit Number*

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

POWER SUPPLY DIAGRAM

ASSEMBLY A60A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C21	G1	E2
C51	G1	K3
C52	G1	K3
C101	E3	A3
C112	E2	C3
C121	G1	E3
C141	F3	G3
C151	G2	K3
C152	G2	K4
C211	E3	C4
C212	E1	C5
C213	E1	C5
C221	F2	E4
C241	D2	H4
C301	E1	A6
C311	C2	D6
C351	D2	H5
C352	A3	J6
C361	B5	K7
C401	D2	A7
C421	B2	E7
C442	D5	H7
C451	B4	J7
C452	D5	J8
C453	D5	J8
C454	D4	J8
C455	A1	K8
C456	E4	J8
C521	B2	E9
C522	D1	E10
C531	F3	F9
C532	A4	F9
C541	G3	G9
C551	F5	J9
C552	F3	J9
C553	E4	K9
C554	G3	J10
C621	D1	D9
C622	D1	D9
31	D1	E10
CR1	F1	A2
CR21	F1	E1
CR22	F2	E1
CR31	F1	F1
CR32	F1	F1
CR33	F2	G1
CR41	F2	G1
CR42	F2	H1
CR43	F2	H1
CR101	F1	A2
CR102	F1	A3
CR103	F1	A3
CR131	F2	F3

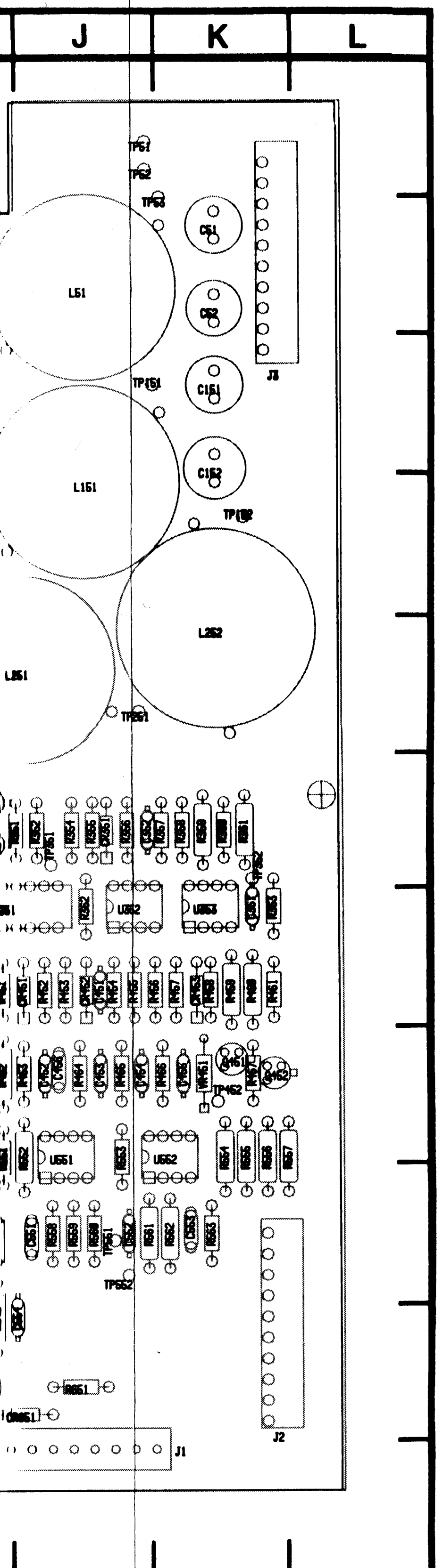
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
CR211	E3	C4
CR212	E3	C4
CR212	E3	C4
CR213	E3	C5
CR214	E3	C5
CR231	F3	G4
CR241	D2	H5
CR301	E1	B6
CR311	B2	B6
CR312	B2	B6
CR313	B2	B6
CR314	B2	B6
CR321	D3	D4
CR322	D3	E5
CR341	D2	G5
CR351	A3	J6
CR451	A4	J7
CR452	B4	J7
CR453	A5	K7
CR521	C1	E10
CR522	C1	E10
CR531	C1	F9
CR641	H3	G10
CR651	B5	J10
DS311	C2	D6
DS641	G2	G10
DS642	A1	H10
E401	C1	C7
E411	B1	B7
J1	A4	K10
J1	B5	K10
J1	G1	K10
J1	H5	K10
J2	A4	K10
J2	G4	K10
J2	H2	K10
J3	G2	K3
J21	G1	A8
J31	G1	A9
L51	F1	J2
L151	F1	J4
L241	D2	H4
L251	F2	J4
L252	F2	K5
L301	E2	B6
L331	F3	F7
L501	F1	B7
L531	G2	F9
Q201	E3	B4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
Q202	E3	B5
Q321	D3	D6
Q322	D3	E6
Q331	D3	E6
Q351	D4	H5
Q352	D4	H5
Q441	G3	G8
Q442	F3	G8
Q451	A5	K8
Q452	B5	K8
Q621	E1	E10
R1	E3	A3
R11	E1	C2
R12	E1	C2
R112	E2	C4
R121	F2	D3
R141	F3	H3
R212	E3	C5
R213	E1	C5
R214	D2	C5
R301	E1	B6
R302	D2	B7
R311	C2	D7
R321	D3	D6
R322	D3	E6
R323	D3	E6
R324	D2	E6
R325	D2	E5
R331	D3	E6
R332	D3	E6
R342	D4	H5'
R351B	A4	H5
R351	D4	H5
R352	A3	J6
R352	C4	J6
R354	A3	J6
R355	B3	J6
R356	A3	J6
R357	A3	K6
R358	A3	K6
R359	B3	K6
R360	B3	K6
R361	B3	K6
R362	B4	J7
R363	A5	K7
R401	B1	B7
R421	C2	D7
R422	C2	D8
R443	C5	H8
R444	A4	H7
R445	D4	H7
R451	A4	H7
R452	B4	J7

CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
F1001	A2	CHASSIS	FL1001	A2	CHASSIS	Q1001	H3	CHASSIS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R1001	G5	CHASSIS	S1001	A1	CHASSIS
R1002	G4	CHASSIS			



Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number
A23 A2 R1234
Assembly Number — *Subassembly Number (if used)* — *Schematic Circuit Number*

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

POWER SUPPLY DIAGRAM ⟨11⟩ a

ASSEMBLY A60A1

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C21	G1	E2
C51	G1	K3
C52	G1	K3
C101	E3	A3
C112	E2	C3
C121	G1	E3
C141	F3	G3
C151	G2	K3
C152	G2	K4
C211	E3	C4
C212	E1	C5
C213	E1	C5
C221	F2	E4
C241	D2	H4
C301	E1	A6
C311	C2	D6
C351	D2	H5
C352	A3	J6
C361	B5	K7
C401	D2	A7
C421	B2	E7
C442	D5	H7
C451	B4	J7
C452	D5	J8
C453	D5	J8
C454	D4	J8
C455	A1	K8
C456	E4	J8
C521	B2	E9
C522	D1	E10
C531	F3	F9
C532	A4	F9
C541	G3	G9
C551	F5	J9
C552	F3	J9
C553	E4	K9
C554	G3	J10
C621	D1	D9
C622	D1	D9
31	D1	E10
CR1	F1	A2
CR21	F1	E1
CR22	F2	E1
CR31	F1	F1
CR32	F1	F1
CR33	F2	G1
CR41	F2	G1
CR42	F2	H1
CR43	F2	H1
CR101	F1	A2
CR102	F1	A3
CR103	F1	A3
CR131	F2	F3

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
CR211	E3	C4
CR212	E3	C4
CR212	E3	C4
CR213	E3	C5
CR214	E3	C5
CR231	F3	G4
CR241	D2	H5
CR301	E1	B6
CR311	B2	B6
CR312	B2	B6
CR313	B2	B6
CR314	B2	B6
CR321	D3	D4
CR322	D3	E5
CR341	D2	G5
CR351	A3	J6
CR451	A4	J7
CR452	B4	J7
CR453	A5	K7
CR521	C1	E10
CR522	C1	E10
CR531	C1	F9
CR641	H3	G10
CR651	B5	J10
DS311	C2	D6
DS641	G2	G10
DS642	A1	H10
E401	C1	C7
E411	B1	B7
J1	A4	K10
J1	B5	K10
J1	G1	K10
J1	H5	K10
J2	A4	K10
J2	G4	K10
J2	H2	K10
J3	G2	K3
J21	G1	A8
J31	G1	A9
L51	F1	J2
L151	F1	J4
L241	D2	H4
L251	F2	J4
L252	F2	K5
L301	E2	B6
L331	F3	F7
L501	F1	B7
L531	G2	F9
Q201	E3	B4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
Q202	E3	B5
Q321	D3	D6
Q322	D3	E6
Q331	D3	E6
Q351	D4	H5
Q352	D4	H5
Q441	G3	G8
Q442	F3	G8
Q451	A5	K8
Q452	B5	K8
Q621	E1	E10
R1	E3	A3
R11	E1	C2
R12	E1	C2
R112	E2	C4
R121	F2	D3
R141	F3	H3
R212	E3	C5
R213	E1	C5
R214	D2	C5
R301	E1	B6
R302	D2	B7
R311	C2	D7
R321	D3	D6
R322	D3	E6
R323	D3	E6
R324	D2	E6
R325	D2	E5
R331	D3	E6
R332	D3	E6
R342	D4	H5'
R351B	A4	H5
R351	D4	H5
R352	A3	J6
R352	C4	J6
R354	A3	J6
R355	B3	J6
R356	A3	J6
R357	A3	K6
R358	A3	K6
R359	B3	K6
R360	B3	K6
R361	B3	K6
R362	B4	J7
R363	A5	K7
R401	B1	B7
R421	C2	D7
R422	C2	D8
R443	C5	H8
R444	A4	H7
R445	D4	H7
R451	A4	H7
R452	B4	J7

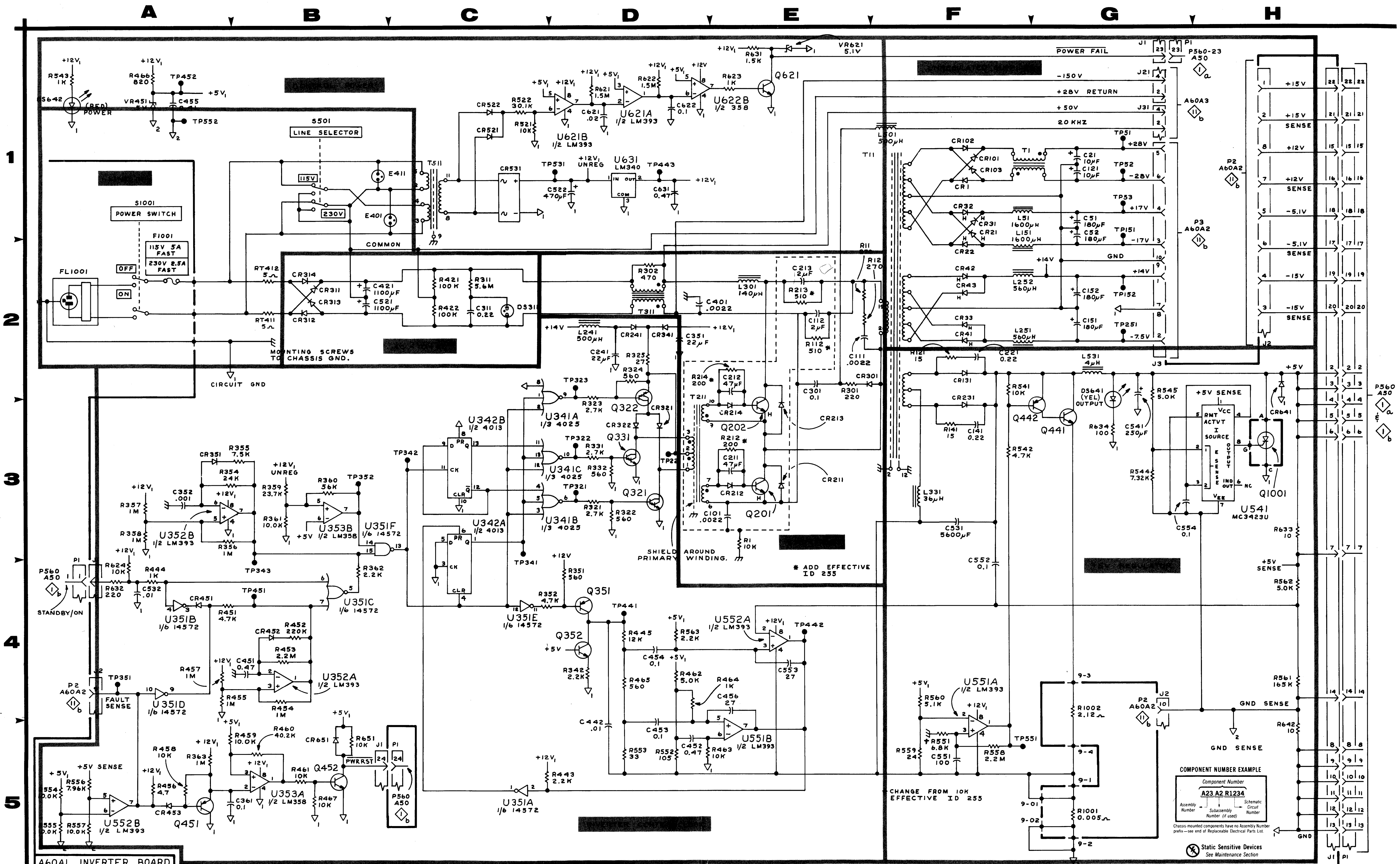
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R453	B4	J7
R454	B4	J7
R455	A4	J7
R456	A5	J7
R457	A4	K7
R458	A5	K7
R459	B5	K7
R460	B5	K7
R461	B5	K7
R462	D4	H8
R463	E5	J8
R464	E4	J8
R465	D4	J8
R466	A1	K8
R467	B5	K8
R521	C1	D9
R522	C1	E10
R541	F2	G9
R542	F3	H9
R543	A1	H10
R544	G3	H10
R545	G2	H10
R551	F5	H8
R552	D5	J8
R553	D5	J8
R554	A5	K8
R555	A5	K8
R556	A5	K8
57	A5	K8
R558	F5	J9
R559	F5	J9
R560	F4	J9
R561	H4	J9
R562	H4	K9
R563	D4	K9
R621	D1	D9
R622	D1	D9
R623	E1	E10
R624	A4	E10
R631	E1	E10
R632	A4	F10
R633	H3	G10
R634	G3	G10
R642	H5	H10
R651	B5	J10
RT411	B2	B7
RT412	B2	B7
S501	B1	B9
T1	F1	A2
T11	F1	C2
T211	D3	D4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
T311	D3	B6
T511	C1	B8
TP51	G1	J1
TP52	G1	J1
TP53	G1	K2
TP151	G1	J3
TP152	G2	K4
TP221	D3	D4
TP251	G2	J5
TP321	D3	E6
TP322	D3	E6
TP323	D2	E6
TP341	C3	G7
TP342	C3	H5
TP343	B4	H5
TP351	A4	J6
TP352	B3	K6
TP441	D4	H7
TP442	E4	H8
TP443	D1	H8
TP451	B4	H7
TP452	A1	K8
TP531	D1	F9
TP551	F5	J9
TP552	A1	J9
U341A	D3	G6
U341B	D3	G6
U341C	D3	G6
U342A	C3	G6
U342B	C3	G6
U351A	C5	H7
U351C	B4	H7
U351D	A4	H7
U351E	C4	H7
U351F	B3	H7
U352A	B4	J7
U352B	A3	J7
U353A	B5	K7
U353B	B3	K7
U541	H3	H9
U551A	F4	J8
U551B	E5	J8
U552A	E4	K8
U552B	A5	K8
U621A	D1	D9
U621B	D1	D9
U622B	E1	D9
U631	D1	F10
VR451	A1	K8
VR621	E1	E10

CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
F1001	A2	CHASSIS	FL1001	A2	CHASSIS	Q1001	H3	CHASSIS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R1001	G5	CHASSIS	S1001	A1	CHASSIS
R1002	G4	CHASSIS			



1980

2921-140

INVERTER & +5V ⟨11⟩a

670-6046-00

INVERTER & +5V
A60A1 670-6046-00

⟨11⟩ a

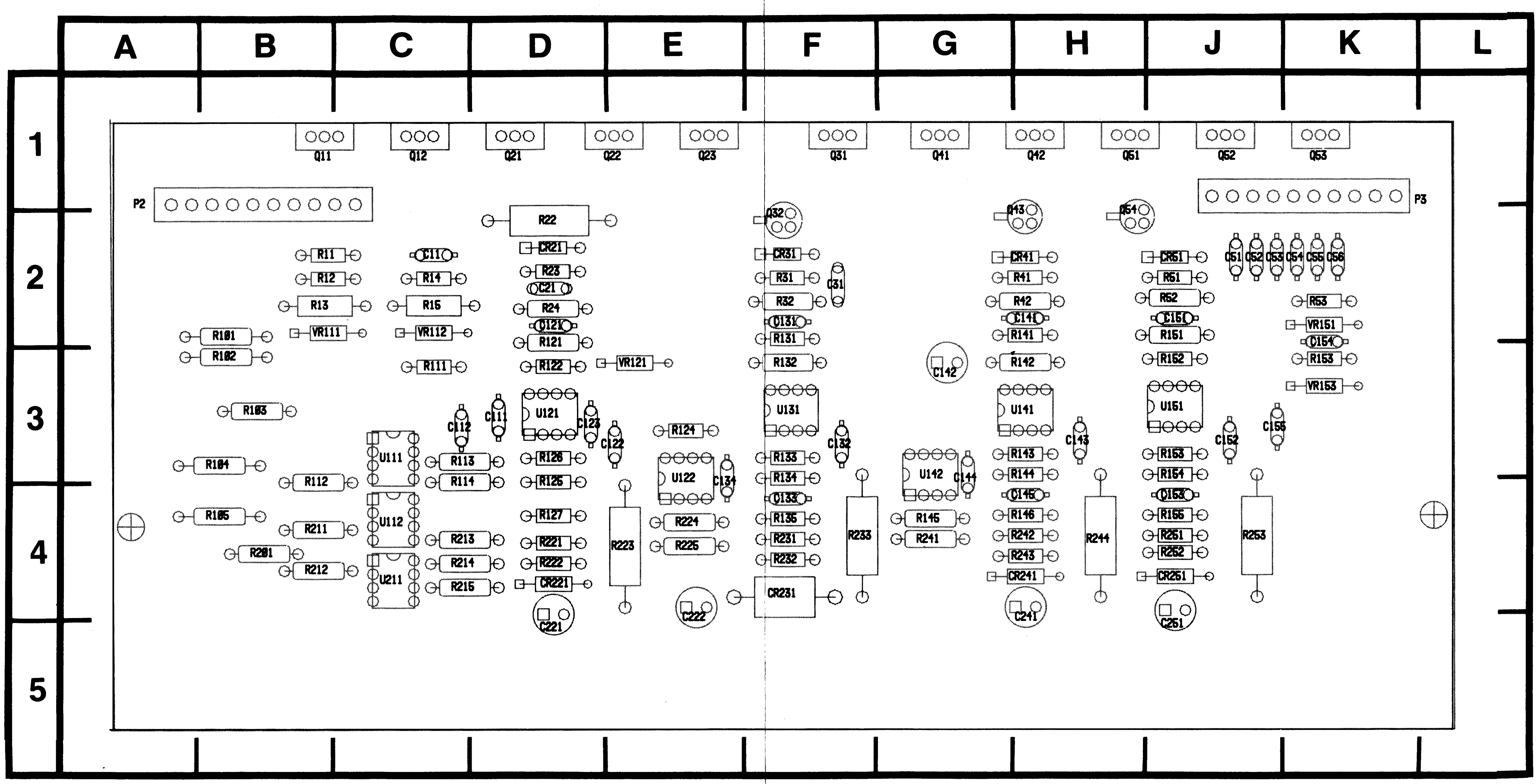


Fig. 10-19. A60A2—Regulator board component locations.

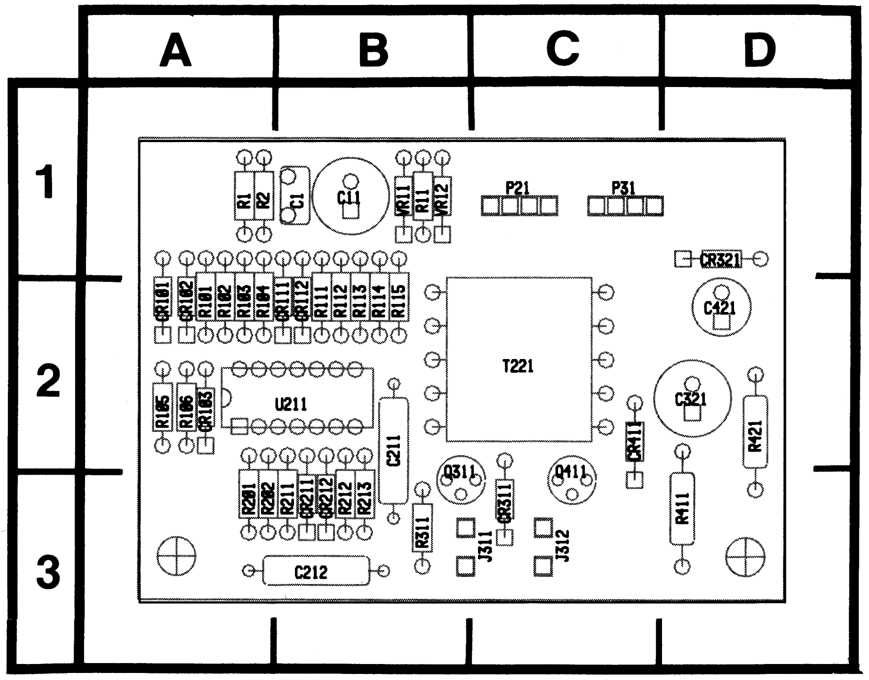
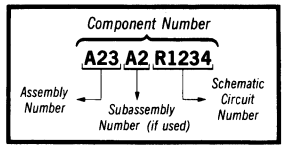


Fig. 10-20. A60A3—Fan Regulator board component locations.

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

POWER SUPPLY DIAGRAM ⟨11⟩ b

ASSEMBLY A60A2

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C11	A1	C1
C21	B2	D1
C31	B4	F2
C51	A2	J2
C52	A4	J2
C53	A5	J2
C54	A1	K2
C55	A3	K2
C56	A3	K2
C111	B3	D3
C112	B3	C2
C121	C2	D1
C122	B2	E3
C123	B2	D3
C131	C4	F2
C132	B4	F3
C133	B4	F4
C134	C2	E4
C141	C5	H2
C142	C3	G3
C143	B5	H3
C144	C4	G3
C145	B5	H4
C151	C1	J2
C152	B1	J3
C153	B1	J4
C154	A3	K3
C155	A3	J3
C221	D2	D5
C222	D4	E5
C241	C5	H5
C251	C1	J5
CR21	B2	D1
CR31	B4	F2
CR41	C5	H2
CR51	B1	J2
CR221	D3	D4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
CR231	D4	F4
CR241	D5	H4
CR251	D1	J4
P2	D1	A1
P2	H4	A1
P3	A1	K1
Q11	B3	B1
Q12	B3	C1
Q21	A1	D1
Q22	A1	E1
Q23	D3	E1
Q31	A4	F1
Q32	A4	F2
Q41	D4	G1
Q42	B5	H1
Q43	A5	H2
Q51	B1	H1
Q52	A3	J1
Q53	A3	K1
Q54	B1	H2
R11	H4	B2
R12	B3	B2
R13	B3	B2
R14	B3	C1
R15	B3	C1
R22	A1	D1
R23	A2	D1
R24	B2	D1
R31	A4	F2
R32	B4	F2
R41	B5	H2
R42	C5	H2
R51	A1	J2
R52	C1	J2
R53	A2	K2

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R101	F4	B2
R102	F4	B3
R103	F3	B3
R104	F4	B3
R105	F5	B4
R111	C3	C2
R112	F4	B3
R113	F3	C2
R114	F3	C2
R121	B2	D1
R122	B2	D3
R124	C2	E3
R125	B2	D3
R126	B2	D3
R127	A2	D4
R131	B4	F2
R132	B4	F3
R133	B4	F3
R134	B4	F3
R135	B4	F4
R141	C4	H2
R142	C5	H3
R143	B5	H3
R144	B5	H3
R145	C4	G4
R146	B5	H4
R151	C1	J2
R152	C1	J3
R153	A4	K3
R153	B1	K3
R154	B1	J3
R155	B1	J4
R201	F5	B4
R211	F5	B4
R212	F5	B4
R213	F3	C4
R214	F5	C4
R215	F4	C4

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R221	A2	D4
R222	B2	D4
R223	B2	E4
R224	C2	E4
R225	C2	E4
R231	B4	F4
R232	B4	F4
R233	B4	F4
R241	C4	G4
R242	B5	H4
R243	C5	H4
R244	C5	H4
R251	B1	J4
R252	C1	J4
R253	B1	J4
U111A	G4	C2
U111B	G3	C2
U112A	G4	C4
U112B	G4	C4
U121A	A2	D3
U121B	B2	D3
U122	C2	E3
U131A	A4	F3
U131B	B4	F3
U141A	B5	H3
U141B	C5	H3
U142	C4	G3
U151A	B1	J3
U151B	C1	J3
U211A	G4	C4
U211B	G4	C4
VR111	B3	B2
VR112	B3	C1
VR121	C3	E3
VR151	A2	K2
VR153	A4	K3

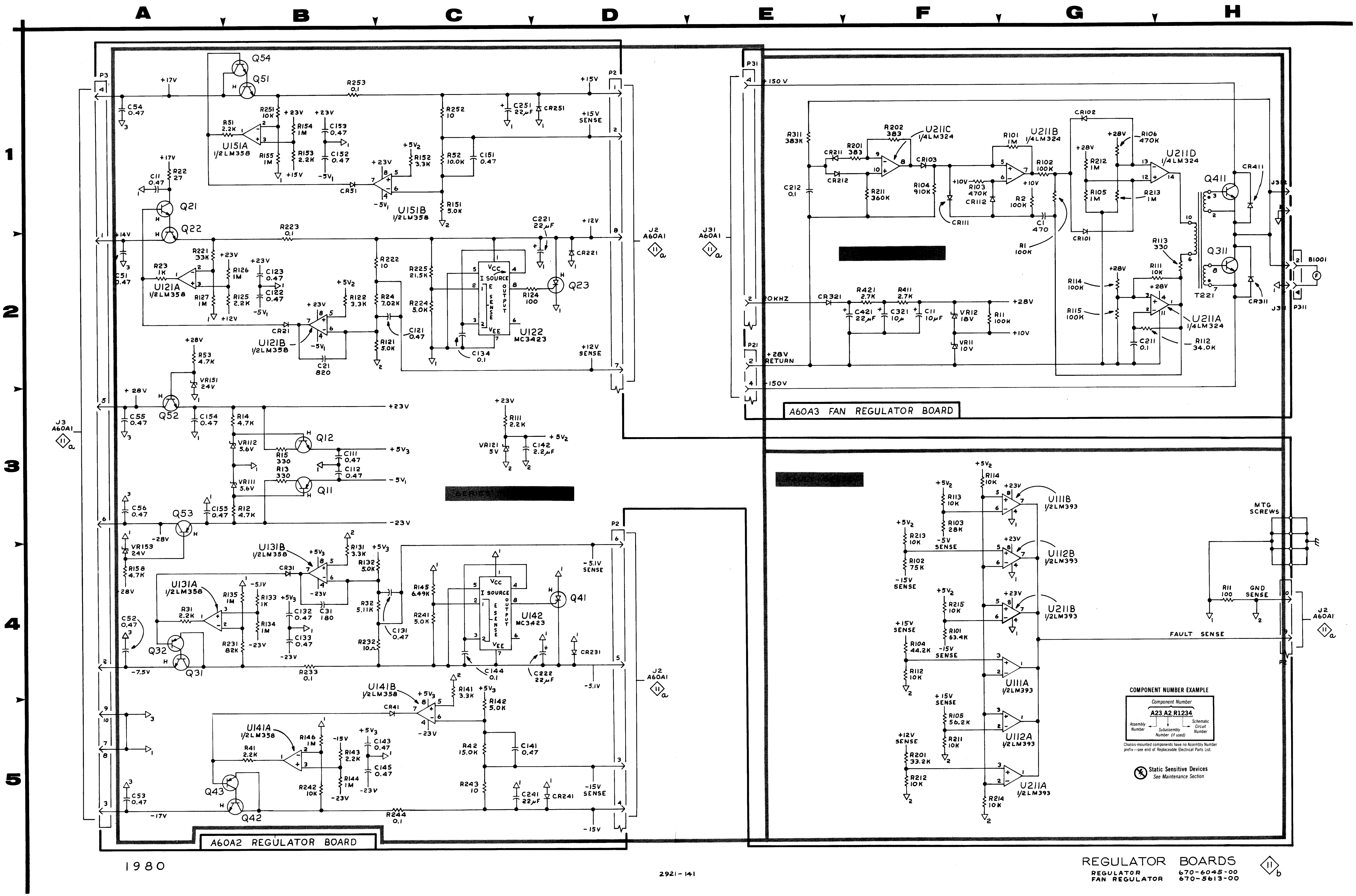
ASSEMBLY A60A3

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	G1	A3
C11	F2	A3
C211	G2	B2
C212	E1	B2
C321	F2	D2
C421	F2	D2
CR101	G1	A2
CR102	G1	A2
CR103	F1	A2
CR111	F1	B2
CR112	F1	B2
CR211	E1	B2
CR212	E1	B2
CR311	H2	C3

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
CR321	E2	D1
CR411	H1	C1
J311	H2	C3
J312	H1	C3
P21	E2	C1
P31	E1	C1
Q311	H2	B2
Q411	H1	C1
R1	G1	A1
R2	G1	A1
R11	F2	A3

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R101	G1	A2
R102	G1	A2
R103	F1	A2
R104	F1	A2
R105	G1	A2
R106	G1	A2
R111	G2	B2
R112	H2	B2
R113	H2	B2
R114	G2	B2
R115	G2	B2
R201	F1	A3
R202	F1	A3
R211	F1	B2
R212	G1	B2

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R213	G1	B2
R311	E1	B3
R411	F2	D3
R421	F2	D2
T221	H2	C1
U211A	H2	B2
U211B	G1	B2
U211C	F1	B2
U211D	H1	B2
VR11	F2	A3
VR12	F2	A3



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REGULATOR BOARDS
REGULATOR 670-6045-00
FAN REGULATOR 670-5613-00